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LEADING ARTICLES

SUDDEN ABDOMINAL PAIN—ITS SIGNIFICANCE.

BYRON ROBINSON, B. S., M. D.

CHICAGO.

(Continued from page 358.)

APPENDICITIS.

Appendicitis is the most dangerous and treacherous of abdominal diseases—dangerous because it kills, and treacherous because its capricious course cannot be prognosed. The peritonitis it produces is either enteronic (dangerous—absorptive) or colonic (mild—exudative).

A concise clinical history should be obtained when sudden pain arises in the right side of the abdomen for it might be due to perforated appendix, gall-bladder or gestating oviduct. The right-sided pain may arise from biliary, pancreatic or ureteral calculus or ureteral flexion.

Pleurisy or intercostal neuralgia (right) may confuse. In the right side, so closely adjacent are eight important viscera, momentous in surgery, that a silver dollar will touch the pylorus, gall-bladder, head of the pancreas, kidney, adrenal, duodenum, ureter and possibly the appendix. Hence differential diagnosis of sudden abdominal pain in

the closely adjacent multiple organs of the right side is difficult—frequently impossible.

The conditions that cause the excruciating, agonizing, shocking pain in appendicitis is perforation and extravasation into the peritoneal cavity. Right-sided muscular rigidity means that the motor (intercostal) nerves supplying the abdominal muscles are irritated. It may be any kind of peritoneal infection (extravasation from any viscus, hepatic, intestinal, ureteral or genital). Right-sided cutaneous hyperesthesia means that the sensory (intercostal) nerves supplying the abdominal skin are affected. It may depend on any kind of peritoneal infection. Sudden cessation of severe symptoms, as rapid diminishing of high temperature and pulse and abdominal rigidity is an evil omen—gangrene of the appendix has probably occurred. Immediate operation should occur.

For years I have made it a rule to recommend appendectomy to patients having experienced two attacks. Fifty per cent of subjects who have had one attack experience no recurrence.

In perforation it is very difficult to interpret the sudden abdominal pain. Associated circumstances would aid. In typhoid fever one would naturally suspect perforation if sudden acute abdominal pain arose, and my colleague, Dr. Weller Van Hook, successfully operated on a typhoid perforation diagnosed by his medical friend. One might think if he was called to a young woman with sudden acute abdominal pain that it was a round, perforating ulcer of the stomach, after excluding pelvic and appendicular disease, but the sudden acute abdominal pain of perforation is so vague and indefinite that only an exploratory incision would interpret it.

The sudden acute abdominal pain from appendicitis (perforation) is more apt to be diagnosed from probability. Now probability is the rule of life, and when one is called to a boy or man with sudden acute abdominal pain, it is likely appendicitis. The pain of appendicitis is at first sudden and generally diffuse, and in appendicitis this is, in my experience, a characteristic and conspicuous feature. The sudden acute pain in appendicitis is doubtless due to violent appendicular peristalsis (colic) of an inflamed appendix, or to the rupture allowing the bowel contents to come in contact with the peritoneum, and also inducing violent irregular peristalsis of the adjacent bowel loops. It is the agonizing, excruciating, pain of peritoneal extrava-

sation. Rigidity of the abdominal muscles over the seat of pathology in appendicitis is a great aid to interpreting the pain. The muscular rigidity is protective and due to the transmission of the visceral irritation to the spinal cord, which is reflected to the abdominal skin (sensory) and to abdominal muscles (motor). There is a nice balance between the peripheral visceral and the peripheral cutaneous nerves in the abdominal muscles through the spinal cord. Local tenderness and local rigidity of the abdominal muscles is a great aid in signification of the sudden acute pain in appendicitis. It might be well to suggest that the position of the appendix is located at any point from the liver to the floor of the pelvis, and also many times where there was more or less of a mesenterium commune, the cecum approached the vertebral column, and the appendix is then liable to lie among the enteronic coils—the dangerous ground of peritonitis. It is likely the pain in appendicitis depends on the seat of the disease, i.e., the mucous membrane has become ulcerated, inducing painful appendicular colic (peristalsis), while the sudden exacerbation of violent diffuse abdominal pain is due to the involving of the peritoneum itself from the extravasation and from violent peristalsis. I see nothing especially worthy of attention in the so-called McBurney point. Pain over the seat of disease is certainly a natural feature, and generally the appendix, lies under a point midway between the umbilicus and anterior superior spine of the ileum. But it is not always so by any means, for I examined with great and anxious care, a short time ago, a young physician with severe pain over the so-called McBurney point, when on operation the long appendix was in the pelvis and perforated. McBurney's point is partially a cutaneous hyperesthesia. Then again, pain on pressure may be reflex, appearing in remote regions of the abdomen. The sudden, acute, diffuse abdominal pain arising in appendicitis, generally subsides in the right iliac fossa after thirty-six hours, and one can nearly always elicit pain on pressure there. This pain on pressure is doubtless the motion transmitted to a sensitive, inflamed peritoneum, and not the dragging of an adhesion, as some assert, for adhesions so newly formed can have no nerves formed in them. But man is subject to appendicitis four times as frequently as woman, due, perhaps to Gerlach's valve being small in man, and thus not allowing the foreign body to escape after entrance, and due also to the greater activity of the psoas muscle in man inducing more peritoneal adhesions to compromise the anatomy and physiology of the appendix. The ap-

pendix lies on the psoas muscle in man more frequently than in woman, and on its longest range of activity, hence when the appendix contains virulent and pathogenic germs the long range of action of the psoas so traumatizes the appendix that it induces the escape or migration of the accidental virulent pathogenic microbes through the appendicular walls into the peritoneal cavity. Common sense and experience would dictate that the pain on pressure would occur in any point of the abdomen possessing inflamed structures. Since probability is the rule of life it is well to look to three great regions of dangerous peritonitis, viz., the pelvic, appendicular and gall-bladder regions.

BILIARY CHANNELS.

The digestive tract has still another common seat for sudden acute abdominal pain, and that is the gall-bladder region. The sudden acute abdominal pain in hepatic colic is not generally so violent as many others accompanying acute diseases of the digestive tract. Patients relate that the pain is aching, dragging, and in the active stage of cutting or tearing. Some relate a feeling of tightness or fullness. But it depends on whether the calculus is attempting to enter constricted portions of the duct, or whether it has already entered. I have had typical cases where operation proved that the calculi only attempted to enter the constricted portion of the duct. No doubt these are the cases which say so often that they have severe pains at any time, but especially after taking hot meals or hot stimulating drinks, or vigorous exercise; whence arises excessive peristalsis, inducing short, temporary hepatic colic. Now, when the gall-bladder has many calculi in it, and when one more or less often attempts to engage in the neck of the gall-bladder, the pain is rhythmical. It begins slowly and rises to a maximum, at the maximum the pain is intense. We have observed such cases and afterwards operated on them, removing many small calculi. Gall-stone perhaps four times as frequent in women as in men; why, we do not know. In my experience patients can generally locate the pain in hepatic calculi more accurately and definitely than almost any other sudden acute abdominal pain. They refer the pain to its proper locality; however, I must admit that this reference is before rupture. After rupture of the cholecyst or duct the pain is indefinite, like other perforation in the peritoneum. The sudden acute abdominal pain in biliary duct disease is characterized by more slowness, less acute intensely and distinct periodicity, than invagination, appendicitis or perforation of the digestive tract. Jaundice is not nec-

essary. Jaundice is determined by the color of the eyeball, and not of the skin. A feature in gall-bladder pain is that it extends well towards the dorsum. Age aids in diagnosing calculus in the biliary passages to some extent.

The patient, frequently middle-aged women, is suddenly seized with agonizing pain in the epigastrium, vomiting and occasionally collapse. The pulse rapid and small, the epigastrium tender (cutaneous hyperesthesia) and the right abdominal muscles rigid (intercostal motor nerves irritated, corresponding to its sensory roots of the spinal cord). With progress of the case the pain localizes in the right hypochondrium and peritonitis begins. I have had cases of rupture of the gall-bladder with no known premonitory symptoms.

It must be borne in mind that gall-bladder perforation presents a different picture than merely violent peristalsis (colic) due to gall-stone in the biliary passages.

The pain of non-perforated biliary colic arises sudden, is agonizing, and especially intense in the gallbladder region. It is generally limited in duration, and frequently associated with jaundice. Biliary calculus may exist without pain (autopsies are rich in this testimony)

ACUTE HEMORRHAGIC PANCREATITIS.

The pain in acute hemorrhagic peritonitis is characterized by being sudden, terrible, agonizing and remains persistent in the region of the pancreas. The patient is attacked so violently that he faints, collapses. The vomitus is a greenish fluid contain in bile and blood. The patient suffers intensely in the epigastric region. It presents the symptoms of peritoneal extravasation (hence excruciating pain) small, rapid pulse, rigid abdomen with sensitive, tender skin, skin cool and bedecked with a clammy perspiration. Temperature ranges high. Profound sepsis gradually deepens and death supervenes in three days. Acute hemorrhagic pancreatitis is a rare disease; I saw no case in some 700 autopsies. It is seldom diagnosed as we still possess no standard differentiating symptoms. Diabetes is suggestive of hemorrhagic pancreatitis or fat necrosis.

EMBOLUS WITH MESENTERIC VESSELS.

Embolus of the mesenteric vessels, a rare disease, produces sudden severe abdominal pain. It is difficult to diagnose and is likely to be equally difficult to treat by any means at our command. The difficulty will be in estimating the amount of intestinal resection required on account of the indefinite demarcation of the line of gangrene due to the embolus.

URINARY TRACT.

In ureteral colic it must be said that the pain resembles that of hepatic colic in many ways, the rhythm being paroxysmal. It intermits and is often agonizingly spasmodic. It requires much careful study to differentiate the sudden acute abdominal pain in hepatic and ureteral colic. This is important, for the plan of action is very different. The pain in appendicitis, ureteral and hepatic colic are in close relation and resemble each other.

Sudden pain in the lumbar region, with progressive radiation toward the inguinal region, and especially testicular retractions, is suggestive of ureteral calculus. The kidney is frequently tender on pressure. Ureteral calculus permits time to complete the diagnosis, as it is non-inflammatory, hence we examine the urine for albumen, blood and pus and with the X-ray for shadows.

The perforation of the ureter will result in extra-peritoneal extravasation which does not induce such excruciating pain as intra-peritoneal extravasation.

1. Pain is a cardinal symptom of ureteral calculus.

2. Pain is not a sign of ureteral calculus.

3. Pain as a single standard is liable to lead to erroneous conclusions and to an incorrect diagnosis.

4. In eighty operations with pain as the guiding symptom for ureteral calculus 70% failed to demonstrate calculus.

5. The vast dimensions of the plexus nervosus ureteris in number of ganglia and number of strands permits irritation from the ureter to pass with facility and rapidity to the abdominal brain, whence it becomes reorganized and emitted: (1) Over the sympathetic nerves of the abdominal visceral plexuses inducing pain, aching, reflexes in the adjacent viscera; (2) the reorganized irritation in the abdominal brain is emitted over the spinal nerves; (a) the intercostals (pain in abdominal walls); (b) over the lumbar plexus (pain in inguinal, hypogastric and external genital regions); (c) over the sacral plexus (pain in the nates, genitals, rectum, thigh, leg and foot). (3) The irritation of the plexus of nerves passes to the abdominal brain where it is recognized and emitted over the cranial nerves (vagus which aids in inducing nausea and vomiting). These reflex pains in ureteral calculus confuses by involving the sympathetic, spinal and cranial nerves of distant regions, and also because other conditions of the ureters than ureteral calculus may duplicate or simulate the reflex pain.

6. Pain simulating that of ureteral calculus is a common symptom of many diseases of the abdominal viscera.

7. Ureteral calculus may exist without pain (post-mortems are rich in this testimony).

8. Calculus may exist with the manifestation of pain in some adjacent visceral tract only, for example, pain in testicle, or ovary (genitals).

9. Other diseases of the urinary tract than ureteral calculus may simulate or duplicate a pain (ureteritis, malignancy, hematuria tuberculosis, vesical calculus, growth, cystitis).

10. Reno-ovarian reflex, reno-testicular reflex, or reno-uterine reflex pains are not signs of ureteral calculus; but are simply intensified localizations of pain along the ureter, which may exist from numerous conditions.

11. Unilateral pain, stabbing pain, muscular trauma pain (Jordan Lloyd), stamping muscular pain (Clement Lucas), pain from corporeal trauma (muscular), pain from the sensitive ureteral proximal isthmus or pelvis, may arise from various conditions other than ureteral calculus.

12. The characteristic of pain in ureteral calculus is inconstancy, variation or radiation and reflexion. It has a tendency to produce sympathetic aching in other abdominal viscera.

13. The pain in ureteral calculus depends chiefly on its position (ureteral pelvis and proximal isthmus, sensitiveness) and also on the mobility of the calculus.

14. Pain (colic) can arise in the ureter, from increased ureteral pressure (calculus, stricture, flexion—obstructing the urinal stream) or from inflamed ureteral wall—ureteritis.

15. Ureteral-lithiasis, cholelithiasis, appendicitis, ureteritis cystitis, nephritis, may produce practically identical symptoms.

Intoxications.—Uremia may be accompanied by abdominal pain, lead colic, blue gum line and occupation. Food of concentrated nature as meats may produce such concentrated urine that urination is accompanied by pain.

TRACTUS GENITALIS.

The sudden acute abdominal pain arising from the genitals is more easily interpreted and managed. The pain can be more definitely located by the patient; and sudden disorganization of viscera, being accessible in the pelvis, is much more within control of the gynecologist. The sudden acute abdominal pain from the genitals is generally due to a ruptured ectopic pregnancy, or the very rare matter of the rupture of a pyosalpinx into the peritoneal cavity. Most of the pains are of slower origin and almost diagnosable. Sex and the reproductive age aid in the interpretation of the case.

With a ruptured pregnant oviduct the pa-

tient complains of sudden excruciating, terrible pain which at first is generally diffuse, but rapidly localizes in the pelvic region. The sudden pain is persistent, muscular rigidity is intense, the abdomen is tender and the patient's face is anxious, with the impending crisis vomiting is not conspicuous. If the hemorrhagic peritoneal extravasation is ample the pain is excruciating and faintness, syncope, shock with extreme anemia occurs. Death frequently occurs from hemorrhage.

Lawson Tait used to advocate that the oviduct would rupture not later than the fourteenth week. However, it may rupture or abort at any time previous to that. To the experienced gynecologist a bimanual vaginal and rectal examination reveals in most cases ample evidence for an operation. In sudden abdominal pain, rapid rise of pulse with lowering of temperature indicates (hemorrhage) gravity and demands surgical intervention. It may be stated that during a decade of attendance in the Mary Thompson Hospital for Women and Children Dr. Lucy Waite and myself have operated on considerable numbers of ruptured gestating oviducts in which the patient could not furnish a clinical history of very much pain or exact date of rupture.

PYOSALPINX.

In pyosalpinx the pain may be sudden and excruciating (involving the peritoneum).

The patient enforces upon herself extreme physical quietness, breathing with the proximal end of the abdomen only. The thighs are flexed, the face flushed, the abdomen tender, sensitive and rigid, the expression that of impending crisis. Bimanual vaginal examination reveals a large uneven mass, which is excruciatingly painful.

The mass should be palpated gently for fear of rupture. One of my patients with a very large pyosalpinx strained at stool, causing rupture and death from peritonitis. At the autopsy I found perhaps a quart of pus, free in the peritoneal cavity. She died from excruciating pain and shock in some ten hours.

In regard to the character of sudden abdominal pain arising from the genitalis is more easily interpreted and managed. The pain can be more definitely located by the patient; and sudden acute abdominal pain, it varies as to its mode of attack, and as to viscera attacked.

AXIAL TORSION OF PEDICLES OR VISCERA.

Torsion of style or rotation of pedicle of a viscus is characterized by sudden severe abdominal pain. The intensity of the pain de-

pend on the completeness of the constriction in the pedicle.

The tumor rotated on its axis gradually enlarges because the venous blood can not return, while the arterial blood continues to pass into the tumor. Ovarian tumors rotate on their axis or pedicles perhaps the most frequently subsequent to parturition. The initial pain is generally severe but not excruciating like extravasation in the peritoneal cavity. As usual the pain is first diffuse, and later becomes localized in the region of the increasing tumor from accumulating venous blood and nerve trauma.

Hyper-rigidity of abdominal muscles and hyperesthesia of abdominal skin accompanies, exists (on account of reflex irritation in the spinal cord).

One of the most important aids to diagnosis is that the women possess a tumor, and that with accompanying abdominal pain the tumor gradually enlarges because the rotating pedicle easily constricts the thin walled veins, while the rigid walled artery persists in injecting its continuous stream into the tumor.

I have witnessed torsion of pedicles in ovarian tumors, oviduct sigmoid, ileocecal apparatus, myoma, enteron, omentum and kidney. Torsion of pedicles may apply to tubular viscera (ureter, intestine, oviduct) as well as vessels.

I have operated on subjects with myomata rotated to such an extent that the entire original blood supply was completely obliterated, the tumor being nourished by newly formed blood vessels from adjacent viscera, especially from the omentum majus. Rokitsky of Vienna, first called attention to the axial rotation of tumors some forty years ago.

The facility of pedicular torsion depends on the elongation and limited dimension of the pedicles. Volvulus is but axial torsion facilitated in the sigmoid by a narrow foot or base (due mainly to mesosigmoiditis).

Axial torsion of the digestive tract constitutes about one-fortieth of intestinal obstruction. Perhaps 6% of ovarian and parovarian tumors experience axial torsion. Mr. Lawson Tait saw some 70 cases, and as his pupil I witnessed with admiration his amazing acumen in diagnosing and successfully operating on axial rotated tumors. My assistant, Dr. A. Zetlitz, operated on a patient with almost complete torsion of the uterus, and in examining the specimen evidence demonstrated itself that it was a slow chronic process and closely associated with peristalsis.

Axial torsion of viscera may be acute or chronic, complete (pathologic) or incomplete (physiologic), hence the manifestations of pain will vary.

Axial torsion of abdominal viscera (tumors) are no doubt rotated by the peristalsis of the viscus itself or that of adjacent viscera, especially the colon (sigmoid), which by its rhythmic movements rotates the ovarian tumor the omentum and the ilium about the cecum. Tumors with axial torsions should be at once removed, while vital viscera with axial torsion should be reduced, untwisted, detorsioned, and sutured in situ for axial torsion tends to recur. It may be due to the constriction, to the blood vessels, to the peristalsis or adjacent peritonitis.

CHIEF FACTORS INVOLVED IN SUDDEN ABDOMINAL PAIN.

The accompanying table presents a bird's-eye view of some of the practical factors involved in sudden abdominal pain. Indelible opinions must be entertained in the diagnosis as to the signification of the abdominal pain whether it be from peritonitis (septic lesion from adjacent viscera) or pain from violent peristalsis (colic) or tubular viscera (due to mechanical irritation, calculus, stricture, flexion or from inflamed parietes). For practical purposes I will present a skeletal table of sudden pain of the six visceral tracts, intestinal, urinary, vascular, lymphatic, nervous, and genital. It is evident that abdominal pain rests on some common factors, as (a) flexion (b) stricture; (c) calculus (violent peristalsis, colic) of tubular viscera, in which the danger and pain are limited. Perforation (extravasation into the peritoneum) of tubular viscera in which danger and pain are unbounded. A decade ago it was thought sufficient to remember the three dangerous peritonitis regions, viz, pelvic, appendicular, and gall-bladder. With the present accumulated knowledge of the abdominal viscera the field presents problems of increasing complexity as presented in the following bird's-eye view of numerous causes of abdominal pain in the several visceral tracts:

I. Tractus Intestinalis	1. Gastrum, enteron, appendix, colon.	flexion stricture calculus inflammation
	2. Biliary ducts.	perforation
	3. Pancreatic duct.	neoplasm colic
	4. Volvulus	sigmoid 60 per cent ileocecal apparatus 30 per cent enteron 10 per cent
	5. Strangulation.	bands apertures
	6. Invagination	ileocecal apparatus 70 per cent enteron 15 per cent colic 15 per cent
	7. Ulceration (gastrum, enteron, colon)	
	8. Splanchnoptosis.	

(Appendages)	(a) Liver	{ (a) ducts—calculus, inflammation, neoplasm. (b) parenchyma, hepatitis, neoplasm.
	(b) Pancreas	{ (c) ducts—calculus, inflammation, neoplasm, pancreatitis. (d) parenchyma—necrosis, neoplasm.
	(c) Spleen—splenitis	neoplasm
II. Tractus Urinarius.	1. Ureter	{ flexure, stricture, calculus, inflammation, perforation, colic.
	2. Bladder	{ calculus, inflammation, perforation, colic.
	3. Prostatitis—vesiculitis, seminalitis.	
III. Tractus Genitalis	1. Oviduct	{ perforation, abortion, colic, inflammation, torsion, neoplasm.
	2. Ovary	{ perforation, inflammation, torsion, neoplasm.
	3. Uterus	{ perforation, abortion, inflammation, colic, torsion, neoplasm.
IV. Tractus Vascularis	{ Veins—phlebitis, thrombosis. Artery—embolus. Artery—aneurism.	
V. Tractus Lymphaticus	{ peritoneum—peritonitis. glands—adenitis. ducts—lymphangitis.	
VI. Tractus Nervosus	{ pain—constant, periodic. pain—on pressure. neuritis. neuroma. neuralgia. hyperesthesia.	

CONCLUSIONS AS REGARDS SUDDEN ABDOMINAL PAIN.

I. There are three kinds of sudden abdominal pain, viz: (a) that of peritonitis, perforation (inflammatory, septic lesions from adjacent visceral peritoneal extravasation, continuous excruciating pain (pain, continuous, unlimited, and life in jeopardy), as 1, perforation of the tractus intestinalis (gastrium, enteron, colon, appendix—its appendages, biliary or pancreatic channels).

2. Perforation of the tractus genitalis (oviductal gestation, pyosalpinx, hydrosalpinx, uterus, ovary).

4. Perforation of the tractus urinarius (kidney, ureter, bladder).

4. Perforation of the tractus lymphaticus (chyle duct, chyle cysts, chyle channels).

5. Perforation of the tractus vascularis (aneurism, hemorrhage, embolus, oviductal gestation, is hemorrhage). (The tractus intestinalis, urinarius, genitalis, vascularis, lymphaticus may perforate, intraperitoneal or extraperitoneal. In extra peritoneal perforation, the pain is similar to intraperitoneal perforation except in degree, however, the danger of the extraperitoneal visceral perforation is limited); (b) that of violent peristalsis (colic, non-inflammatory) of tubular viscera, as in mechanical irritation,

calculus, stricture, obstruction, volvulus, flexion, oviductal gestation, parturition, constipation, aneurism, invagination, hernia, strangulation by band (inflammatory) (pain limited, periodic, life not in jeopardy); (c) that from painful peristalsis (colic inflammatory) from inflamed parietes of tubular viscera, as ureteritis, choledochitis, salpingitis, cholecystitis, cystitis, myometritis, myocorditis, enteritis, colitis, appendicitis (pain periodic, inflammatory, life not in jeopardy). First and foremost for practical purposes it will be instructive to consider sudden abdominal pain from perforation of the three excretory mucous visceral tracts, viz: intestinal, genital and urinary (as they not only perforate but develop immediate sepsis and jeopardizes life). Second, sudden abdominal pain should be considered from perforation of the two non-excretory, non-mucous visceral tracts, viz., vascular and lymphatic (as they perforate, but do not develop immediate sepsis nor place life in immediate danger).

II. In making a diagnosis of sudden abdominal (constant) pain probability is the rule of life, e.g., (a) sudden abdominal pain (constant) pain accompanied with vomiting, abdominal rigidity, rise of pulse and temperature, tympanitis, is peritonitis (perforative), as appendicular, genital, biliary, gastro-intestinal, hemorrhagic pancreatitis. (b) Sudden (inconstant) abdominal pain with practically negative pulse temperature, abdominal rigidity, tympanitis and perhaps vomiting, is violent peristalsis (colic), as flexion, stricture, calculus, inflammation, strangulation, invagination, volvulus, axial torsion.

III. Extravasation in the peritoneal cavity is accompanied by agonizing, excruciating pain.

IV. The leading symptoms should not be obscured by opiates until its complete clinical history as possible is obtained.

V. The clinical history is frequently a pencil of light in the diagnosis of sudden abdominal pain.

VI. Examine the patient completely from head to foot (especially per rectum and per vaginam).

VII. Exploratory peritonotomy is chiefly justified only in ascertaining the extent of visceral diseases and rarely justified to determine a diagnosis.

VIII. Delay in deciding the diagnosis of sudden severe abdominal pain should be avoided. Prompt diagnosis is the sheet anchor for immediate successful medical or surgical treatment.

IX. It must be remembered that sudden severe abdominal pain is a matter of gravity, and prompt investigation with prompt decisions should occur so that the patient's

life may not be placed in jeopardy by delay or disastrous treatment be instituted.

X. (a) Determine, if possible, the location of the initial pain; (b) enquire if the pain was at first diffuse in the central abdomen for a while; (c) later and finally observe whether the pain localizes itself in the region of the affected organ (peritonitis).

XI. The location of the pain may be superficial (hyperesthesia of the skin) or deep in the muscularis (rigidity). McBurney's point is a skin hyperesthesia (from the cutaneous branches of the twelfth dorsal and first lumbar nerve—the ileo-hypogastric).

XII. The location of the sudden abdominal pain is indicated by the segment (somatic) of the spinal nerves in adjacent abdominal muscles (rigidity), skin (hyperesthesia). The diseased abdominal viscus is protected, fixed by muscular and nerve mechanism similar to the muscular protection fixation of an inflamed joint.

XIII. The topographic anatomy of the abdominal viscera should be mastered, for, it is the solid ground of nature on which rests rational diagnosis. This can be accomplished by study in the cadaver and at autopsy.

XIV. Remember the major regions of peritonitis—appendicular, pelvic and that of the gall-bladder.

XV. Remember the major regions of violent peristalsis, colic (calculus), biliary, ureteral, oviductal and pancreatic.

XVI. Call the most available and competent abdominal surgeon early in consultation.

XVII. Remember that operations do not kill—it is disease that tolls the funeral bell.

XVIII. Operations on the dying are unsatisfactory.

GENERAL TREATMENT OF SUDDEN ABDOMINAL PAIN.

First and foremost, should be introduced:—(a), anatomic rest which is maximum quietude of skeletal or voluntary muscles. Retire to bed not to rise for defecation or urination; (b), physiologic rest which is minimum function of viscera. Food and fluid are prohibited per mouth.

No anodynes or in minimum repeated doses until clinical history and the diagnosis is completed (maximum doses of anodynes obscure the diagnosis).

(NOTE.—The method of treatment for abdominal pain by anatomic and physiologic rest was especially advocated by the distinguished English physician, Wilkes, in 1865 (living at present), continued by the celebrated American Alonzo Clark (1807-1887) by the "opium splint" and established for-

ever in 1888 by one of the greatest surgical geniuses of his age—Lawson Tait (1845-1900).

Heat (hot, moist cornmeal poultice, hot water bag, hot bath) aids to relieve pain.

No cathartics—cathartics stimulate peristalsis, increases pain and distribution of sepsis. They induce vomiting. A rectal enema (or two) may be employed—the composition may be equal parts of molasses and milk, soap suds, glycerine, magnesium sulphate. Rectal injections of air.

THE REASON FOR "PATENTS."—And here it may be remarked that there is a reason for the "patent-medicine fake." Many patent and "proprietary" compounds are distinctly useful. Sometimes they fill a void in what we are wont to term "legitimate" therapeutics. Most of those that are worthy of confidence have been manufactured in the first instance, from the prescriptions of physicians. Many patent compounds have become distinct evils, whatever they may have been originally.—M. F. Cupp, American Jour. of Clinical Medicine.

CONCERNING THE DIAGNOSIS.—Joseph N. Study declares that upon the correct diagnosis depends the intelligent administration of therapeutic agents, the proper use of surgical appliances, and the all-important question of the necessity of operative surgical procedure. After reviewing the history of some of the modern aids to diagnosis, he concludes that we are justified in saying that it is unwise to declare that an individual is suffering from some disease simply because the specific bacillus is found in the body, that the Widal or diazo methods indicate typhoid fever, or that the tuberculin test indicates tuberculosis. These helpful methods of diagnosis the writer believes to be somewhat limited in value, and too much dependence should not be placed in them as a class unless they are accompanied by the clinical phenomena which are characteristic of the disease. The microscopical examination of diseased structures, secretions and exceptions has often cleared up a doubtful diagnosis. The writer concludes by saying it would perhaps be fair to say at the present time that there are many cases both of a medical and surgical nature, in which the diagnosis must be somewhat limited. The physician who would serve his patient best must use all methods for correctly interpreting disease and other abnormal conditions of the body, not relying upon any one procedure to the exclusion of others which have been proven to be meritorious.—Medical Record.

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A CASE DIAGNOSED CARCINOMA VENTRICULI WITH RARE AND UNEXPECTED FINDINGS.

JEROME E. COOK, M. D.

ST. LOUIS, MO.

I wish very briefly to present the history and course of a case which to me at least was both interesting and instructive. The case was seen by several more experienced than I without suspecting the correct diagnosis; the history, with the exception of the one fact which would have made the diagnosis, was fairly complete and accurate as substantiated by the patient's daughter. Following is an abbreviation of the history and clinical notations:

White, male, age about 70, and a brick-layer by occupation; entered the City Hospital November 15th, 1905, with the diagnosis of debility. Habits were good; takes beer occasionally, no whiskey. Family history shows no hereditary taint, no tuberculosis, cancer or neurotic tendencies.

Previous History.—Had measles, scarlet fever and varioloid in childhood. Has had several attacks of rheumatic fever, the last one occurring a year ago. Has been subject to attacks of sore throat.

Present Trouble.—Patient says he has had an attack "just like this" before. This is corroborated by his sister, who says that about ten years ago he was taken with the same kind of sickness, and the doctors did not think he would live. His present illness began a week before the patient entered the hospital when he noticed that his throat was getting sore, swallowing was very painful, and he became very hoarse. He did not take solid food, because it gave him too much pain, but liquids he was able to take without so much discomfort, and they passed readily enough to the stomach. Two or three days after the beginning of the trouble patient says a diffuse swelling appeared at the base of his neck—he indicates the suprasternal region.

On the day he was admitted to the hospital he expectorated a small amount—patient

says about a teaspoonful—of blood and mucus. This relieved his pain considerably, and deglutition became much easier. I saw the patient for the first time the next morning. He then told me that he had just "choked up"—this is the expression he used—about half an ounce of light red blood. This I saw; it was partially clotted with a small amount of mucus not intimately mixed, which on microscopical examination was seen to consist mainly of red blood cells in good condition with a number of non-degenerated leucocytes and a few bacteria.

On the same day patient had a very large, tar-like passage from the bowels. With the exception of this local trouble patient has no pain or discomfort, but he feels very weak. He says that during the past three months he has lost considerable weight, even as much as 25 or 30 pounds. (His sister also says that in the past half year he has lost greatly in weight and strength.)

Physical examination shows a fairly well built man of large frame, somewhat emaciated, skin loose, cheeks sunken, clavicles prominent, sallow complexion, mucous membranes very pale, only one or two teeth remain in the mouth, tongue dry and swollen, pupils equal and react. The breath has a peculiar foul, fishy odor. The swelling which the patient says is at the base of his neck is not evident. Chest is quite well formed, etc., no rales, no abnormal dullness, area of cardiac and hepatic dullness not increased. Second aortic sound is slightly accentuated. Abdomen flat, epigastric pulsation, muscles flabby, no tenderness, no palpable masses, no ascites, no visible hernia. No general glandular enlargement, no edema, arteries very markedly sclerosed. Pulse 96, respiration 24, temperature 98.4. The temperature remained about this point, or was a little subnormal during his illness. The urine shows a low specific gravity, a trace of albumin, and some casts.

The trouble is evidently about the upper part of the digestive tract. The tongue is dry, swollen and glazed, the under surface is congested and shows dark blue dilated veins; the mouth and pharynx are dry. The laryngoscope shows the lower pharynx and the

larynx dry, and containing considerable dry, stringy mucus. I could note no other abnormality.

On the morning of the 18th the patient again brought up blood to the mouth, and also had a small tarry stool; he is very weak and somewhat restless and complains of epigastric tenderness for the first time. He does not vomit. Leucocytes number 25,000, hemoglobin 30-40%. Smear shows nothing of special significance. Patient is getting nothing by mouth, is fed rectally. In account of his age and weakness, but most especially because of a possibility of renewed hemorrhage I do not feel justified in using the stomach tube for diagnosis.

November 19, 1905.—Rectal feeding, saline enemata with whiskey hypodermoclyses; nothing given by mouth except tannin. Patient very weak. Small tarry stools.

November 20, 1905.—Stools show no evidence of hemorrhage today, same treatment continued, enemata not well retained.

November 21, 1905.—Small amounts of fluid by mouth with no apparent bad results, patient growing weaker.

Patient showed no improvement and died on the 23d. No new symptoms bearing on the local trouble developed. We were much at a loss for a diagnosis. The history and picture were not typical of us of any special condition. After thinking over the matter pro and con, and considering ulcer, carcinoma, varicose esophageal veins, and aneurism, in view of the history of steady loss of weight, the cachexia, passage of a little fresh blood from the mouth with large tarry stools, epigastric tenderness, pain and difficulty in swallowing I ventured a diagnosis of carcinoma of the stomach involving at least to some extent the cardia, and that some large vessel had been eroded.

The post-mortem findings were startling. Besides a fatty degeneration of the heart, small white kidney, etc., the following condition existed. Opposite the cricoid cartilage a piece of sharp triangular shaped tin measuring about an inch on each side had lodged in the esophagus perforating the walls on both sides into the posterior mediastinum, and causing a gangrenous abscess behind the esophagus, extending from the first to the fourth dorsal vertebra.

As to the reasons and justification for the diagnosis of carcinoma about the cardia I do not care to enter. No doubt I should have done like Allen Ramsay's dial, "gladly own I dinna ken."

I came across the following statement in a text-book, "The presence of a perforating foreign body, cancer, or aneurism, about the esophagus is indicated by such characteristic

symptoms that the condition is readily recognized." The present case is the only one of foreign body in the esophagus that I have seen, but knowing the great variety of objects that might enter this tube with different size, shape and other physical properties I believe that there is some exaggeration in the statement. Some might cause total obstruction with very little hemorrhage, others little hemorrhage or obstruction with considerable pain, or as in the present case considerable initial pain, excessive hemorrhage and partial obstruction.

A few points were brought home very forcibly by the case: Firstly, in all cases of hemorrhage from the upper part of the digestive tract the possibility at least of foreign body in the esophagus must be considered.

Again, an article which appeared in a recent Johns Hopkins Bulletin is recalled in which the routine use of the X-ray in all obscure cases about the thorax is advocated. This latter seems a very rational and practical suggestion, at least in hospital work. In the article reported its value is demonstrated and several very peculiar and obscure cases diagnosed, mostly aneurism. In the present case its use would have settled the diagnosis and given opportunity for surgical interference.

DISCUSSION.

Dr. William Rush.—This is an extremely rare and interesting case. I do not see how a correct diagnosis was possible without the use of the X-ray and this omission was excusable under the circumstances. This man was passing blood from the bowels and gulping up fresh blood, and you therefore, naturally, would not introduce the stomach tube or a sound for fear of doing harm. I should have been inclined to consider this a case of ulcer, rather than carcinoma, owing to the freshness of the blood and the acute beginning of the trouble. However, the treatment the man received was correct, the withdrawal of food by the mouth, and the avoidance of sounding. Possibly the introduction of a hard or a soft sound would have detected the resistance, but one would not introduce a sound in the case of a patient losing blood from the stomach or esophagus, apparently from ulcer. I have never seen an ulcer of the esophagus, but I know of a case with many features similar to those related this evening, in which the diagnosis of ulcer of the esophagus was finally made and the patient recovered under the method of treatment used by Dr. Cook in this case. A case presenting such symptoms as painful swallowing, blood not vomited but gulped up, should lead us after this experience to make

use of the X-ray. This case is a great lesson to us. Had I had such a case, not knowing of such an occurrence, I should have thought of an ulcer, and should have attempted to relieve the symptoms by the ulcer treatment, and of course the patient would have died.

Dr. W. E. Sauer.—The proper thing to have done here would have been to examine the esophagus. The sudden onset and the difficulty in swallowing would have led to a suspicion that the trouble was in the esophagus. The patient could have been cocaineized and an examination easily made. The fact that the pain came on suddenly and that it continued on swallowing pointed to some condition in the throat or esophagus, and if the esophagoscope had been used in the examination I think the diagnosis could have cleared up the case.

Dr. J. M. Pfeifferberger.—This reminds me of a case that occurred when I was in the hospital. That was a carcinoma of the esophagus. The patient complained much as this one did and had hemorrhages. We introduced a sound and found there was a thickening about midway between the mouth and the cardiac end of the stomach. We were able to pass the stomach tube and found there was no trouble in the stomach, so a diagnosis of carcinoma of the esophagus was made. But the patient was not in a condition for operation. He died in the hospital, and we found this thickened portion of the esophagus at post-mortem, a thickening to such an extent that it explained the feeling of fullness in the throat that the patient had complained of. It was practically the same picture that Dr. Cook's case presented. There were also the tarry stools and the vomiting of fresh blood. The breath was very offensive.

Dr. Jules M. Brady.—The recent work of Holzknecht published in the *Berliner Klinische Wochenschrift*, would seem to justify the use of the X-ray as a routine procedure in all obscure abdominal and thoracic conditions. It is all very well to theorize after we know the result of a case, but from the history and objective examination the diagnosis of carcinoma at the lower portion of esophagus or of the cardia, seemed very probable. The correct diagnosis could have hardly been arrived at by any other means except by the use of the X-ray. Holzknecht claims to have been able to palpate abdominal tumors which previous to the use of the rays he was unable to feel; some palpable tumors which were supposed to belong to the stomach he was able to make out had a different seat. He experimented with Sahli's desmoid test and by

means of the fluoroscope was enabled to see when the little bag which was tied with cat-gut opened. I observed a similar case to this one at the City Hospital, though the foreign body was in a different situation. A patient was brought to the hospital in a comatose state; he was sent to the nervous ward, of which I had charge. After observing the case twenty-four hours, not being able to arrive at a diagnosis, patient was transferred to a medical ward. Every possible condition was thought of until on digital examination of the rectum a thickened bone was found, extending across the rectum penetrating the urethra. Operation was performed, but failed to save the patient.

Dr. William S. Deutsch.—It is interesting to get as complete a history as has been given us in this case. There are a few points in which I differ from Dr. Rush: first, that the patient was very likely mistaken in having had a similar attack twenty years ago. There might have been some loosening of the piece of tin; it might have been partly dislodged and given many of the symptoms he had. It would be very rational to believe that he had swallowed this when a child. The other point in which I disagree with Dr. Rush is that the surgeon being called upon to operate for something when the internist could not make a diagnosis, would not have had to make a gastroenterostomy, but might have given the man a fistula through which he could be fed. He would not necessarily feel that because he could not find an ulcer he must make a gastroenterostomy, but he would have made a fistula by which the patient could have been kept comfortable and these hemorrhages avoided. A point that may be of interest to Dr. Brady is that in a recent visit to the Mayos I found they were doing much of that work there. They have made a great many experiments in the past year, especially good results have been obtained by them in X-ray work showing dilations in the esophagus.

Dr. B. H. Gradwohl.—I would ask whether the failure to make a chemical analysis of the stomach contents was due to fear of doing damage by the introduction of the tube.

Dr. Wells.—I wish to inform those who have spoken of the X-ray in connection with this paper, and who seem to have erroneous views as to the scope of utility of the ray, that its field of usefulness is by no means limited to the detection of the denser substances, normally or otherwise encountered in the body. Recently at this society I showed in connection with a paper by Dr. Clopton on Paget's disease of the bone, some plates in which minute changes in the periosteum were plainly

shown. It is quite common to observe certain adventitious muscle changes in making radiographs for other lesions or suspected bone affections; and such changes in the soft parts may be neither calcareous nor osseous deposits, but merely relative thickening, due to more transient conditions, such for instance as simple congestion or the more enduring cellular hyperplasia. For the whole scheme of radio-photography is based on the principle of relative density, and there is almost no limit to the possibilities in showing contrast between substances of varying penetrability to the rays. The difficulty is in the matter of technique. The X-ray has been before the world for nearly a decade, and in spite of the fact that office instalment and hospital equipments are getting to be as common almost as any of the other essentials to an up-to-date armamentarium, there is a woe-ful lack of anything like the technical knowledge that is absolutely necessary in the operating of an X-ray outfit to the desired ends. I have frequently come across instances of men trying to make radiographs without paying attention to the requirement of backing the plate with some highly absorbing substance, such as sheet lead, with the result, of course, that their plate was fogged, unless, the exposure happened to be a very short one. The reason for this fogging being the responsive or retro-radioactivity of the table or chair upon which the plate happened to be placed in making the exposure. When we have learned to use to the very best advantage our apparatus, no matter how modest and meager it may be, we will very much broaden the field of the X-ray and the hopes of its champions and those who see a promising future based on the accomplishments of the past, will be realized.

Dr. L. H. Hemplemann.—There was no attention attracted to the esophagus, and had the X-ray been used it would have been directed to the stomach, which would not have shown anything in the esophagus. Patients with thickening in the esophagus bring blood up in a different manner from those who vomit the blood, and this might have led to a consideration of the esophagus. Had one sounded and met an obstruction at the cricoid cartilage it would have been thought that it was a hardening of the cricoid which is common in old people rather than a foreign body.

Dr. Brady.—Would it not have been dangerous to pass a tube down there? Might not a perforation have resulted?

Dr. Sauer.—No, not if done carefully. You could use a short tube, one with a conical

point and never lose sight of the end of the tube. In all cases of bleeding from the esophagus or trachea these tubes are introduced, but always absolutely under the direction of the eye. There is absolutely no danger.

Dr. Wells.—As to the possibility of this piece of tin having been swallowed in infancy, while I see plenty of reason for totally discrediting such view in this case, I recall a case sent to me for X-ray in which I located a tin whistle lodged in the esophagus of a child about one year old, the child having presented no alarming symptoms and took its milk without difficulty. This whistle would have gone down and been passed in the expected manner because of its shape and smoothness, but had it been otherwise and of a shape to engage itself in the membranes of the gullet, it might have done so, and produced no more serious symptoms; for a time, at least, until inflammatory changes were induced, when, of course, the presence, of a serious condition must have become evident.

Dr. Rush, in closing.—I did not really suppose any surgeon would operate on this stomach, but Dr. Deutsch says they would. Of course a gastrostomy would have done no good for a man bleeding to death from the esophagus. Not having in mind a foreign body the picture was of an ulcer and where you suspect an ulcer the use of sounds and stomach tubes are entirely contraindicated. Of course there are instruments, such as the esophagoscope, that would have revealed the trouble, but we must consider the case as the picture was presented to Dr. Cook. It was the picture of a bleeding ulcer. Many cases have been caused to bleed profusely by the introduction of the tube, even fatal hemorrhage resulting. No one would think of an obstructing foreign body in such a case without such an experience as this.

Dr. W. C. Mardorf said that the paper was a most interesting and instructive one, and thought Dr. Cook should be commended for his courage and frankness in reporting the case. The failures were not heard from as much as the successful cases, but in this instance the essayist showed the true scientific spirit. The speaker differed with the statement which had been made that the report was the picture of gastric ulcer. The typical form of gastric ulcer, as he conceived it, was that of a more or less chronic condition of indigestion, with pain and tenderness over the stomach, vomiting, and the vomiting of blood. In this case the onset was sudden, with no previous digestive dis-

turbance; there was entire absence of pain in the stomach, and there was no vomiting. Even the blood which the patient brought up he described as having been "choked up;" he coined the expression himself, because he objected to the term "vomited."

As to Dr. Deutsch's suggestion that the tin might have been swallowed in infancy, it should be remembered that the canning industry is comparatively recent. The point which the case impressed was that one should continue to study every possible way wherever the diagnosis is not entirely satisfactory.

Dr. Charles H. Shattinger.—Dr. Mardorf's remark that absence of pain in the stomach spoke against ulcer recalls a case that I had very recently. The man did not vomit blood, he would lean over the side of the bed and simply let it run. This lasted for hours. He would drink water or beer to relieve his thirst and that liquid ran out also. He had no pain in the stomach at all. He simply had hemorrhage, but I know he had an ulcer, for he died and I made the post-mortem. I do agree, however, that in the vast majority of cases you would expect pain in stomach in ulcer. I agree with Dr. Mardorf that we owe a great deal of gratitude to Dr. Cook for the report of this case and his very frank statements. I hope the doctor will not relinquish this standpoint as he grows older.

Dr. Gradwohl.—I would second Dr. Mardorf in his remarks relative to Dr. Cook's courage. I have followed up many cases at autopsy and found the conditions far removed from the diagnosis, but it has been seldom my lot to hear a man report his autopsy findings so different from what we might have expected.

Dr. Cook, in closing.—I must acknowledge that the case looks quite a little different than it did before the post-mortem. The diagnosis of carcinoma still seems to me the most probable of those considered, however I do not care to enter into a justification of my conclusion, as it has no pertinent bearing on the points I wished to emphasize. I am sorry an esophagoscope was not at hand; the laryngoscope was of course unable to reveal a body as far down the esophagus as this one.

OVER a million circulars of warning have been distributed during the past two years by the German Society for the Prevention of Venereal Disease. The campaign has been very thorough, physicians, dispensaries, and the army being the agencies through which the distributions were effected. It is the purpose of the society to issue a similar circular to women and girls during the coming year.

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EDITORIAL

THE endeavor by limitation of membership to insure fellowship with the scientifically elect has characterized a number of American medical organizations, and has been productive of adverse criticism, not alone among outsiders, but even within the ranks. The editor of the Lancet-Clinic has admirably presented this matter as it appears to us, and we take pleasure in giving our readers the editorial. He says:

"It is rather remarkable that in democratic America, where all men are born free and equal, and where there is no nobility and aristocracy, and class distinctions have no existence, exclusive medical societies have flourished and reached a degree of development greater than in any other country on the face of the earth. Paradoxical and surprising as this may appear, when applied to any sect, profession or class of individuals, it is still more so in the profession of medicine. Medical societies should be organized solely for the advancement of science and the love of truth, and they should stand with outstretched arms to welcome all who are willing to receive and ready to impart information and knowledge. It is difficult to conceive how societies of this character have been permitted to continue an apparently successful course for such a long period of time. Societies which are unnecessarily exclusive are necessarily narrow, prejudiced and bigoted, and their work will eventually partake of the same character. Additions to the societies are dominated by the same influences, and new members are qualified by personal rather than scientific attainments. These societies, like all organizations in general, are made up of the good, bad

and indifferent, and the close affiliation and exclusion impart to mediocrity a false, fictitious value and an intolerable air of self-satisfaction.

"There can be no question that these small, non-representative societies have their shortcomings and exert unfavorable and pernicious influences, and that their existence is necessarily short-lived. The high pedestal upon which they place themselves and the aristocratic air which they boldly assume is a slur and insult to the rank and file, to which they properly belong. Left to themselves they will probably die their just, natural death. Their weakness is readily apparent, and their undoing is a matter of easy accomplishment.

"The American Urological Association affords a striking example of how a society founded upon general, non-exclusive, liberal lines will flourish and prosper and completely eclipse a society conducted along the older lines. For a great many years a small exclusive body of medical men, composed mostly of general surgeons and genito-urinary specialists, formed and conducted a small exclusive society called the American Association of Genito-Urinary Surgeons. They met once a year, read some very good, some very mediocre, papers to each other, elected from time to time a few, some good, some mediocre, but for the most part personal friends, to membership, and excluded many whose scientific and personal attainments justly entitled them to membership in such society. These excluded members, under the guidance of Valentine, Guiteras and a few other, able urologists, effected the American Urological Association and adopted a broad, general, liberal organization. The new society prospered and flourished from its very beginning; its meetings have been largely attended, the papers presented have been of the highest type of excellence and of the deepest scientific interest, and the discussions of the wholesome and beneficial character. Its rostrum contains the names of the most active, energetic and prominent genito-urinary specialists of the country, and the future of the society is an assured success from every standpoint. The society has established and successfully operated its official organ, the American Journal of Urology, which has gained for itself the enviable position of the leading genito-urinary journal of this country, and one of the leading genito-urinary journals of the world. Success and long life to the American Urological Association and all others of its type! It is truly American, medical and scientific in character. Let us relegate to oblivion our exclusive, un-American, unscientific societies by thorough reorganization, or let them be justly eclipsed by the

more liberal, broader and correspondingly greater special societies."

THE large attendance at the recent meeting of the American Medical Association is a matter of satisfaction to the officers of the association, and to those who were so fortunate as to be present. In a registration of about

4800, Missouri is credited with 73. Our urban delegations were usually large, while country representation was surprisingly small. The following Missouri physicians attended:

From St. Louis Drs. N. Allison, J. H. Amerland, J. M. Ball, W. Bartlett, M. A. Bliss, R. D. Carman, M. B. Clopton, W. S. Deutsch, W. L. Dickerson, C. H. Dixon, W. B. Dorsett, G. S. Drake, D. Forster, F. R. Fry, W. W. Graves, Jno. Green, Jr., T. A. Hopkins, C. H. Hughes, A. R. Kieffer, B. Lewis, A. H. Meisenbach, C. V. Mosby, H. G. Mudd, J. S. Myer, C. D. Riley, J. C. Salter, H. J. Scherck, S. I. Schwab, R. E. Schlueter, B. E. Stockwell, J. H. Tanquary, F. J. Taussig, P. Y. Tupper, H. P. Wells, M. Wiener, F. A. Baldwin, W. H. Luedde.—37.

From Kansas City, Drs. Beattie, Binnie, Block, Carbaugh, Cordier, Crowell, Curdy, Frick, C. L. Hall, F. J. Hall, Jackson, Kyger, Murphy, Neff, Pearse, Porter, Punton, Sheldon.—18.

From St. Joseph Drs. Campbell, Elam, Fassett and Potter.—4.

From Hannibal, Dr. Baskett; Marshall, Drs. Gore, Gray; Summit, Dr. Rusk; Kirkwood, Dr. Wyer; Sedalia, Dr. Dunlap; Cape Girardeau, Dr. Rosenthal; Springfield, Dr. Farnsworth; Marthasburg, Dr. Alexander; Novinger, Dr. Gashwiler; Linneus, Dr. E. D. Standley; Brookfield, Dr. K. V. Standley; Laeade, Dr. Z. T. Standley; Holstein, Dr. Stewart; Plattsburg, Dr. Desmond.—14.

A PARTY of thirty enjoyed the Illinois Central Grand Trunk route from St. Louis to Boston; our party joined with others at Chicago, and a party of 185 was the consequence, and we were

given a special train. A day was spent at Niagara Falls, a few hours at Toronto, the trip through Thousand Islands and the rapids of the St. Lawrence on steamers of the Richelieu & Ontario Navigation Co. to Montreal took twelve hours. At Montreal we found our train waiting for us, and after a few hours in that interesting city we boarded

The Trip to Boston.

and landed in Boston the following morning. A few separated themselves from the main party at Montreal and made a side trip to Quebec, arriving in Boston a day later. Without exception the members of our party rejoiced in their choice of route, it gave us, as was announced in the prospectus, a maximum of comfort and sight-seeing—it gave so much of sight-seeing that for this alone the trip was well worth taking. Not one of us returned without a determination to do lower Canada again and thoroughly.

THE AMERICAN UROLOGICAL SOCIETY at its recent meeting in Boston elected Dr. Bransford Lewis, of St. Louis, to its presidency for the ensuing year. Official recognition has not been coming this way with any great liberality from the national bodies, and it is a pleasure to note this exception. The other officers elected were: Secretary, Dr. Hugh Cabot, Boston; treasurer, Dr. F. R. Hayner, Washington. The society will hold its 1907 meeting at Atlantic City.

THE BRITISH MEDICAL ASSOCIATION AT TORONTO.—The 1906 meeting of the British Medical Association will be held in Toronto, Ontario, next August. A cordial invitation is being extended to the American profession to attend. This is an exceptional occasion, and an opportunity we seldom have, it is to be hoped that a large number of physicians from "the States" will avail themselves of it. St. Louis should send a strong delegation. Rates have not yet been announced, but they will be made.

THE AMERICAN ROENTGEN RAY SOCIETY.—The seventh annual meeting of the American Roentgen Ray Society will be held August 29, 30, 31, 1906, at the Cataract and International hotels, Niagara Falls, N. Y. A large and interesting program containing the names of the best known X-ray workers in this country as well as a number from abroad, has been prepared. An interesting feature of the meeting will be the exhibit of prints and negatives. The railroads have granted a rate of a fare and a third on the certificate plan. The officers of the society are: President, Dr. Henry Hulst, Grand Rapids, Mich.; secretary, Dr. Geo. C. Johnston, Pittsburg, Pa.; treasurer, Dr. Leavitt E. Custer, Dayton, O.; vice-presidents, Dr. Russell H. Boggs, Pittsburg, Pa.; Dr. Clarence E. Skinner, New Haven, Conn.; Dr. G. Williams, Richmond, Va.; Dr. Eugene W. Caldwell, New York City. Full information regarding the meeting and application blanks for membership may be obtained by addressing the secretary, Dr. Geo. C. Johnston, 611 Fulton Building, Pittsburg, Pa.

REPORTS ON PROGRESS

Comprising the Regular Contributions of the Fortnightly Department Staff.

PATHOLOGY AND BACTERIOLOGY.

R. B. H. GRADWOHL, M. D.

ST. LOUIS.

The Bacteriological Examination of the Blood of Cadavers.—M. Otten (Virchow's Archiv f. path. Anat., Band 184, Heft 2, May, 1906) adds another chapter to the contention of Simmonds of Hamburg that the bacteriological examination of the blood of cadaver is a useful procedure in making the pathological anatomical diagnosis in autopsy work. He reports about two hundred cases in which there was a careful bacteriological examination of the heart's blood of cadavers, in 42% of which the blood was sterile and in 58% it contained bacteria of various varieties. This blood was taken out at intervals after death varying for the most part from 16 to 24 hours after death, the body being kept in a "cool room" during this time before autopsy and blood examination. The sum of his results coincides with that of Simmonds who reported that there is practically no invasion of the heart's blood post-mortem, and that blood obtained from this place is just as useful for bacteriological analysis as that obtained from peripheral veins, all of which the reviewer of this article respectfully denies. In the December number of 1904 of the *Annales de l'Institut Pasteur*, the reviewer published an account of work done along this line with the blood obtained from dead bodies upon which autopsy had been performed for medico-legal reasons. Otten in his article neglected to acquaint himself with the full literature on this subject by overlooking this article, the results of which coincided with that obtained by Cannon whose work is mentioned. This work of the reviewer's showed that in 50 selected cases the streptococcus was present in about 65% of the cases indiscriminately, even though the cause of death was of such a nature as gunshot wound of the brain or abdomen, etc. The blood from the heart showed streptococci, but that from the peripheral veins was sterile in all cases excepting those in which there was intra vitam a general pus infection.

The Histology of Callus.—Theodore Guembel (Virchow Archiv, Band 183, Heft 3, 1906) says that the subject of histological investigation of the structure of callus has often been gone over, but with the newer methods the subject needs revision. Normal and pathological ossification was studied by

Kolliker and Manasse, as well as by Kasso-witz, v. Recklinghausen and Ziegler. Strict examination in a quantitative way of the metaplastic formation has not, however, been gone over. Guembel determined to investigate this problem; for his material he thanks Recklinghausen who furnished him material in the shape of fractured ribs and bones of the extremities of children; also Bethe who furnished him experimentally induced fractures in the bones of rabbits and dogs from the physiological department of the University of Strassburg. He also used an ossifying myxochondroma of the scapula in a male patient of 56 years of age. The first material used was the callus on the right ulna of a two years' old child which died in the hospital. The patient had a perineal abscess; was affected with hereditary syphilis and rachitic condition was simply a slight "rickety rosary," separation of the epiphyseal cartilages: a form of rachitis called by Recklinghausen "chondromalacia." The fracture of the ulna occurred on June 9, 1902, and the patient died on July 8, 1902—age of the fracture being five weeks. Autopsy showed in addition to these clinical observations cavities and broncho-pneumonic areas in the lungs. The callus had a thickness of $2\frac{1}{2}$ to 3 mm. A cartilaginous area was seen at the point of the fracture; osteoblasts were seen, but no osteoclasts. The bone and myxochondrom, from a male patient was well as the bones of rabbits and dogs were sectioned and stained according to the thionin-phosphorus method of Schmorl. The sum of all these observations was, that in pathological conditions of bone formation, metaplasia predominates. While in normal ossification, this plays an insignificant role, in the ossification of a callus, the formation of young bone substance follows in the wake of a metaplasia. The onset of metaplasia depends upon the vascular supply; where there is poor vascularization there is metaplastic growth of bone as well in the periosteal as in the narrow callus, with this difference, however, that there is hyaline cartilage only in the periosteal callus, while in the narrow callus there is hyaline cartilage and fibrous marrow formed. With the formation of blood vessels, the metaplasia is arrested and there follows final ossification, according to the endochondromal type. The influence of division of nerves upon the transformation of periosteal callus has not yet been determined.

IN cases of pain in the hip of doubtful origin, examination of the kidney regions may discover the cause.

OTOLOGY.

ALBERT F. KOETTER, M. D.

A Case of Late Hereditary Syphilis of Both Labyrinths of the Ear.—(V. Behm, *Archiv fuer Ohrenheilkunde*.)—A patient twenty years of age, whose father had been treated for syphilis, was seized a year ago with sudden deafness of the left ear, for a half year increasing deafness of the right ear which up to this time had been very sensitive to noises. Perforation of the nasal septum, cicatrized scars of soft palate as well as the surprising results of a schmier cure, on the hearing verified the diagnosis of bilateral syphilis of the labyrinth. The excruciating pains in the left ear which appeared after six weeks were due to a cicatrized retraction of the handle of the malleus in the healing of the synchronously existing leutic affection of the tympanic cavity, and was relieved by the extraction of the malleus and breaking up of the adhesions. After a year these pains recurred, and were said by the author to be due to a specific perichondritis of the left tubal eminence. On account of the rapid return of the hearing, this case serves as a warning, in spite of the doubtful prognosis given by nearly all authors in hereditary syphilis, doubtful especially, if as in this case, the late treatment and the simultaneous existence of adhesive processes in the middle ear, to inaugurate in all cases an energetic inunction treatment and try all other anti-leutic remedies.

Two Cases of Deafmutism Due to Ptomaine Poisoning.—(W. Sohler Bryant, *New York Medical Record*.)—Case I. Girl of two years and seven months, always healthy, was taken sick after eating fruit ice, with fever and symptoms of a gastro enteritis. Urine normal. After four days staggering gait, difficulty in drinking, spasms of the face. One week after poisoning total deafness and dumbness. Ears show no changes. Same condition after a year. Case II. Boy of two and a half years. Seven weeks ago attack of fever, four weeks later child could not walk and was deaf. Both cases are no doubt due to a toxic neuritis of the acoustic and toxic degeneration of the speech centers. Author goes thoroughly into the differential diagnosis as opposed to encephalitic processes, atropine poisoning, embolic infarcts of the brain, meningitis and bulbar paralysis.

Ear Affections in Scarlet Fever.—(Sprague, *Providence, American Journal of Medical Sciences*.)—Of sixty children who entered the Rhode Island Hospital from January to June, admitted to the scarlet fever division,

seven acquired acute suppurative otitis media, three were already affected when they entered the hospital therefore about 17 per cent, seven bilateral and three unilateral. Of the seven cases developed after admission, four had earache, increased temperature and acceleration of pulse; three had no pain, and showed only high temperature. Of the seventeen cases only two showed involvement of mastoid and came to operation. Sprague divides the scarlatinous middle ear inflammation with the following forms: (1) Acute serous; (2) acute suppurative; (3) acute necrotic form. The acute serous inflammation usually occurs during stage of eruption, or at least during the first ten days. The symptoms are those of an ordinary catarrhal otitis media. If the child is old enough it complains of fullness, tinnitus, deafness and pain; in very small children restlessness and rise of temperature are noticed. During desquamation the external canal is full of scales and the activity of the ceruminous glands is increased. In the acute suppurative inflammation, which usually occurs in the latter stages of the disease the temperature reaches 103 deg. F., and more. Patient complains of lancinating pains radiating to head and neck, swelling of the glands of the neck and stiffness of the muscles are often noted. Occasionally we find cerebral irritation, convulsion and vomiting. The necrotic or diphtheritic form leads to rapid softening of the tissues, the membrane and the ossicles and to invasion of the labyrinth. The secretion is colored and very fetid.

Author believes that in mild cases the infection takes place through the tube, in severe cases by means of the blood or lymph route. He considers the ear secretion very contagious, in three cases where the child was dismissed after the disease had run its course and the usual quarantine rules were observed, but the ears still suppurating, another child of the same family took sick with scarlet fever, when all other ways of transmission but that of the ear secretion could be excluded.

Cholesteatoma of the Ear.—(De Stella, *Belgique Medical*.)—There are two kinds of cholesteatoma: (1) The secondary or false. (2) The primary or true cholesteatoma called endothelioma. Author speaks of the several different sizes or kind and the seat of the cholesteatoma. Whereas the secondary cholesteatoma is very frequent, the true or endothelioma is met with very seldom. For its inception the following adds to its formation: (1) Epidermization of the drum membrane; (2) closure of the tube, and (3) large perfora-

tion of the membrane. The etiology and pathogeny of true cholesteatoma are still very much in doubt, at all events the formation takes place at the expense of the endothelium of the tympanic cavity, attic and antrum. Then follows the clinical picture of cholesteatoma and its complications. The diagnosis is usually very easily made. Lucase has found an odor peculiar to cholesteatoma in 98% of the cases, the author would not consider it as specific of cholesteatoma, but the result of the process of decomposition. Treatment: If the removal of the cholesteatoma does not occur in the natural way, a radical removal of the petrous portion of temporal bone and mastoid process by means of a radical operation.

Etiology of Disturbances of the Auditory Nerve Apparatus Appearing Suddenly.—Stein (*Monatsschrift fuer Ohrenheilkunde*) quotes a number of observations where patients blame mental disturbances as the cause of subjective sensations of hearing or alteration of the hearing as well as cases of functional disturbance which are caused by traumatic influence, even though the trauma be not such as to assume severe changes of texture in the labyrinth, or in the cranial cavity, and gives us several points of support for the explanation of the phenomena of a disease heretofore called vasomotor disturbances of the hearing. Common to all cases as found by the internal examination of the objective symptoms of the disease a more or less advanced arteriosclerosis, and by examination of the hearing apparatus the symptoms of an affection of the auditory nerve. Author, therefore, believes he may accept the alteration of hearing, as well as the subjective impressions of hearing as the local phenomena of a latent arteriosclerosis cerebri, made manifest by the psychic disturbance, or the injury, and the assumption of a vascular spasm as most plausible, which on account of the impaired elasticity of the vascular walls continued longer and its deleterious results on the brain nutrition were brought to bear on the auditory nerve apparatus.

Differential Diagnosis Between Abscess of the Cerebellum and Suppuration of the Labyrinth.—(Neumann, *Archiv fuer Ohrenheilkunde*.)—Opposed to the symptoms common to both diseases vertigo, vomiting, character of the nystagmus, etc., Neumann has observed differential diagnostic points in several cases. Whereas, in the labyrinth disease existing nystagmus with the progressive destruction of the labyrinth becomes weaker, it increases in intensity with the extension and continued existence of the cerebellar abscess. If there exists in the beginning of the laby-

labyrinth disease nystagmus toward the diseased side it soon changes the nystagmus in the visual direction toward the healthy side. In cerebellar abscess the nystagmus changes from the healthy to the diseased side. Finally Neumann mentions as of differential diagnostic moment the fact that a nystagmus due to cerebellar abscess will not be influenced, in contrast to labyrinth nystagmus, by the opening of the labyrinth.

DERMATOLOGY.

ROBERT H. DAVIS, M. D.

Radio-Therapeutics of Ringworm at the Municipal Laboratory of the City of Paris at the Hospital of St. Louis.—Saboraud (Brit. Jour. Derm., June, 1906) gives an exhaustive account of the methods in vogue at the above mentioned institution. His treatments extend over such a wide series of cases (about 4,000 a year), and over such a length of time (since the latter part of 1903), that the results are reliable, and we seem to have reached at last a specific for this so chronic trouble. Unfortunately, the apparatus required is not easily obtainable in this country, and considerable skill is necessary to get the proper results. He uses a dynamo of three-fourths horse power to work a static machine of twelve discs of 75 centimeters diameter, and a speed of 950 revolutions a minute. In the circuit between the condensers of the static machine, and the two poles of the tube, is interposed a spinter metre (a kind of ball electrode), the separation of which measures the spark in centimeters, and the resistance inside the tube to the current which traverses it. A small, self-regulating tube, of only 8 centimeters diameter is employed. The tube is surrounded, at a distance of 3 centimeters from its wall, by an incasement, or shield, of "strong sheet iron lined on its inside by a thick layer of insulating ebonite." This covering is open to the tube on the side that does not give out X-rays. On the other side, opposite the point of emergence of the X-rays, this covering is pierced by a hole to which is adapted the whole series of localizers. The localizers are metallic cylinders, all of the same length, but of different diameters. Their variations in size are, of course, necessitated by the variable dimensions of the patches on the scalp which it is desired to X-ray. The length of the localizers is the same always, and, is such that the skin, closely applied to the external orifice of each is 15 centimetres from the anticathode. His experience shows that, in the treatment of ringworm at any rate,

the quality of the ray employed makes but little difference. The quantity given is the main, almost if not quite the only, point of importance. "Even if it is admitted that there are different categories of X-rays, with different qualities, all are depilatory, and all equally so when equal quantities are compared." He uses, as before stated, a static machine, and extremely hard tubes, making ten to twelve on the radio-chromometer of Benoist. By this combination he secures the maximum working in the minimum time. The period of exposure can be reduced to six or seven minutes, but it has been found to be better to let the sitting last from ten to fifteen minutes according to the condition of the atmosphere, tubes, etc. If a coil is used, a moderate voltage and a reduced ampèrage is required (60-70 volts for an average of 4 ampères in the primary current). In regard to the all important question of quantity, he shows conclusively that the X-rays should be measured at their exit from the tube, and not as has been attempted in terms of the current that produces them. Holzkecht's pastilles were produced with this object. The pastilles used by the author, and invented by himself and Dr. Noiré, are based on the alteration caused by X-rays in Bristol paper, coated with an emulsion of platino-cyanide of barium, in collodion with acetate of starch. These pastilles ought to be placed at half the distance from the source of the X-rays, or anticathode, that the skin is. In other words, they should be placed at $7\frac{1}{2}$ centimeters from the anticathode. The tube also should not be so large that the pastilles would have to be placed at a less distance than $2\frac{1}{2}$ centimeters from the glass. The pastilles, while under the influence of X-rays, should be covered by black paper, or if not, the working should be in semi-darkness, for daylight delays the color changes in the platino-cyanide of barium. His X-ray radiometer has a standard tint, which he calls "tint B." When the pastille, placed at $7\frac{1}{2}$ centimeters, has taken this tint, the skin, at 15 centimeters, has received exactly the quantity of X-rays necessary to cause "the complete depilation of the region without irritation, without dermatitis, and without compromising the ultimate regrowth of the hair." Naturally, the time of exposure varies from day to day, and even from hour to hour, owing to variations in the source of the ray, atmosphere, tube, etc., but the assumption by the pastilles of the proper tint shows when the requisite amount has been given, and, in this trouble at all events, the therapeutic effect is directly dependent on the amount, and not on the quality, of the X-ray used. It is very important to place the pastille at

exactly $7\frac{1}{2}$ centimeters from the anticathode. (Whether the above technique has not been accurately carried out, or for some other reason, eminent rayists in this country have failed to get such flattering results with Sabraud's pastilles. Both Stelwagon and Pusey have given adverse reports on their use during the last year.—Ed.) The author says that, with his experienced nurses, he has never had a case of dermatitis in 7,000 exposures. He thinks that the factor of idiosyncrasy in the occurrence of an X-ray dermatitis is accordingly negligible. In comparing the color the pastille has assumed with the standard tint, the comparison should be made by daylight. If one patch only exists this can be thoroughly treated at a single exposure, but if it is necessary to depilate the entire scalp, a series of ten or twelve exposures is necessary, but there need be no time interval between them. All is accomplished at one sitting, each area treated being covered with a lead disc, retained in place by an elastic band, before the next area is exposed. About fifteen days after the treatment the hair falls out with the slightest traction, their root ends being atrophic and sharpened like the point of a needle. On the eighteenth day, the head is washed with soap, rubbing and pulling out with the fingers all the weak hair. The roots of trichophytic hairs are the last to fall, and they must not be allowed to remain, for they can infect new hairs. Daily washings with soap remove them. By the thirty-fifth day the head, thus treated should be entirely bald. From the first day of operation, the entire head is anointed daily with R tr. iodin (fresh) 1 part, alcohol (80%) 9 parts. The head thus treated remains bald about two months. Then the new hairs begin to appear. The new growth ought to be complete in four months. When the color B has been exceeded the regrowth may be retarded for a month or six weeks longer, but baldness that remains after six months is permanent. Overexposure may occasion a cicatricial atrophy which will cause a definite absence of regrowth, or, in place of the old hair which is smooth, a growth which is crinkled and woolly may occur, or the new hair may be like the old, but much thinner. Insufficient application results in atrophic hairs, sharpened at the ends, and in the exclamation-point forms of alopecia areata. In these cases depilation may be pushed far enough for a cure to result. In other cases, diseased hairs may remain, and the whole process have to be gone over again. A second exposure should not be made on the same place, within a month.

Traitement de la Syphilis Par la Voie Rectale.—Audry (*Annales de Derm. et de Syphiligraphie*, March, 1906) reports a series of thirty cases treated in this unusual fashion. Mercury is given in suppositories of the grey oil, which are prepared as follows: As many times four grammes of cacao butter as one wishes suppositories are taken, and softened by heat. When the cacao butter loses its transparency by cooling, the gray oil is incorporated into it, and it is allowed to cool in moulds. The gray oil being 40%, in order to have the suppositories contain gr. .01 of mercury, .025 gr. of the gray oil should be added to each suppository; for an .02 gr. of mercury suppository, gr. .05 of the gray oil must be added to each, etc. The gray oil is prepared with mercury, oil of vaselin, and lanolin. For adults the dose is gr. .03, for children gr. .015 to .02 is sufficient. One suppository is used each day, the dose being generally given in the afternoon. It was tried giving two a day, but the patients then complained of burning and pain at the anus. At the end of a month, an intermission of four or five days is made, and then the course begun over again. The results claimed are as follows: (a) tolerance is at once established. In a few cases diarrhea occurred, but the author does not consider this due to the suppositories, since, always after a mild purging, the treatment could be recommenced, and there was no more trouble. (b) There was no pain, or tenesmus, or straining. (c) There was never a trace of erythema, or fissure. (d) Except for a slight gingivitis in one case that had been salivated previously by treatment before entering the hospital, nothing abnormal presented itself in the mouth. The mouth was always kept as aseptic as possible, however. (e) The simultaneous administration of iodide of potash occasioned no inconvenience, nor untoward symptoms. (f) Long treatments are apparently harmless, as a child of three and a half years was given more than 100 suppositories, gr. .015 daily, in less than four months without the least inconvenience either local or general. (g) As to efficacy, he considers it equally to any form of treatment administered by the mouth, with the exception of bichloride of mercury in large doses. In general, the symptoms are modified by the fourth day just as by the usual methods. The action is particularly quick and certain with respect to lesions of the ano-genital region, and the bucco-pharyngeal. Violent, generalized, papular syphilides were quickly influenced. In two cases, during the treatment, a violent, papular outbreak occurred. Both these patients were alcoholics. They were put on injections of the gray oil, and the outbreak re-

sisted even this manner of treatment up to five injections. They should not then be counted as pointing to the inefficacy of the suppositories. Another case exhibited an early return of the trouble, but a similar relapse, in this case, occurred after a second apparent cure from a course of rubbings and injections. In general, the action of the suppositories seems to be quite as good as that of inunctions, or injections. As regards the indications for adopting this form of treatment, he says that the cases reported are as yet too few to enable him to give specific rules, but, in a general way, in grave cases, he would advise injections or inunctions; in cases not so urgent, the rectal method offers a means of mercurialization which seems to be perfectly sufficient and satisfactory. It can then be considered applicable in the class of cases usually treated by the mouth, and can be substituted for that method when digestive troubles appear, and consequently hinder gastric and intestinal absorption. He considers it quite possible that this method will be the best for the treatment of infantile syphilis, and closes with the observation that "there is a real utility in achieving and possessing a new method of administration of mercury, which has proved for itself efficacy, coupled with simplicity and an unassailable harmlessness."

HYPERTROPHY OF THE BRAIN.—J. H. Haberlin, Pawtucket, R. I. (*Jour. A. M. A.*, June 30), reports the case of a child, aged 2, dying in convulsions in which the apparently symmetrically enlarged brain weighed 1,712 grams, (53½ ounces). The membranes were not adherent, there was no flattening of the convolutions, no disproportionate increase in the size of the ventricles and the gray and white matters were developed proportionately. Clinically, the case could not be differentiated from hydrocephalus.

INFANTILE SCURVY.—Alice M. Steeves, Boston (*Jour. A. M. A.*, June 30), reports two cases of infantile scurvy observed by her and describes the condition. She believes that the disorder is common in large orphan asylums and similar institutions and in examining the mouths of 180 girls at the Lancaster Industrial School she found 20 per cent with thickened spongy gums, saliva purulent and mucoid, and with the nose, mouth and throat inflamed. These girls all complained of having rheumatic pains, and while the condition, she says, is not strictly scorbutic, it seems to her to suggest a field for investigation.

SOCIETY PROCEEDINGS

ST. LOUIS MEDICAL SOCIETY.

Meeting May 26, 1906.

The society had as its guests at this meeting* Dr. Maurice H. Richardson, of Boston and Prof. Dr. Duehrssen, of Berlin, who addressed the society.

Dr. Richardson spoke on "Further Observations on the Diseases of the Biliary Tract with Especial Reference to Diagnosis."

He said that the subject lies on the borderland between medicine and surgery, and should therefore interest a general society of physicians and surgeons. President Eliot, of Harvard, has said that there is nothing like the joy of good, and the essayist thought there was nothing like the joy of diagnosis. One would think that since the first operation for gall-stones was performed many years ago by Botts, that the matter has progressed so far that little remains to be learned about it. A great deal, it is true, has been learned in the past twenty years about this subject. One fact stands out of all this knowledge that has been gained, that the earlier the diagnosis is made, the sooner the operation should be performed. The least is known of the diagnosis of gall-stones in their earlier manifestations, together with the fact that little is known of the diagnostication of stones of typical or unusual form. Until recently the observation of such cases has depended upon autopsy findings or upon spontaneous rupture. Even the autopsy findings have taught but little because the pathologist who finds gall-stones thinks that they have rested in the gall-bladder without ever having produced symptoms. The finding of gall-stones in connection with other operations upon the abdominal viscera have shown some relationship between cause and effect.

The symptoms of gall-stones are well defined when there is a passage of gall-stones out of the bladder, producing "colic." This is pathognomonic, especially if the passage of the stone is slow enough to cause jaundice. Pain in the gall-bladder simulates pain in the gall duct only when the pain lasts a long time. In the earlier forms of gall-stone disease before the gall-stone has made its way into the ducts or duodenum, the symptoms are trivial and not understood. Later, when the irritation of the gall-bladder mucous membrane ensues, with ulceration, thickening of the walls of the bladder, etc., there is a regular sequence of events. There is a great variation, however, in the way in which impaction of stones is felt.

There are certain ways in which the gall-

stone manifests itself that is characteristic: when the stone passes from the gall-bladder into the duodenum. It is said that in many cases in which gall-stones are found in the cystic duct and common duct, there is no history of pain and other symptoms. The wide variation which has been found in many cases shows that the history should have been taken more carefully and the diagnosis could then have been made. All symptoms in the right hypochondrium are suggestive of gall-stones. Because the patients do not complain of excruciating pain, it by no means follows that there is no stone present.

There is a definite relationship between cause and effect and a thorough exploration will determine the pathologic picture. In demonstrating gall-stones found in the course of other operations, Dr. Richardson said that he was able to follow the history of gall-stones. Such experiments cannot but convince one that all gall-stones produce symptoms from their beginning until their final passage. The profession should be impressed with the difference between the slight danger of removing gall-stones in their early formation and the great danger of removing them in their later manifestations where there has been thickening of the gall-bladder, or ulceration or impaction in the ducts.

For all practical purposes it can be said that the nidus of gall-stone is in the gall-bladder and that the micro-organism of some kind is usually the cause. Between the time of the aggregation of the crystals making up the gall-stone and its final passage, there must necessarily ensue a long period of time. If gall-stones are found many years after typhoid fever, and if one accepts the thought that the typhoid bacillus acts as the nucleus of the stone, then the life history of the stone might be said to date from the attack of typhoid fever. The size of the stone is not a thing by which you can judge its age. The consistency of the stone is a more important thing by which to judge its age. Gall-stones usually have a long age before they begin to offend. A soft stone easily crushed between the fingers may be usually regarded as one of very recent formation.

Symptoms referable to the gall-bladder do not always mean the presence of gall-stones. In some cases inspissated bile will cause symptoms in this region. What are the sources of evidence upon which to base a diagnosis? One source is the information given by the history of gall-stones found in the course of other operations. Such operations are operations for malignant disease of the alimentary tract in men, operations upon the pelvic organs in women. Symptoms are accounted for in some cases by other condi-

tions, i. e., malignant disease of the intestines with gall-stones impacted in the duct. The speaker said that he often thought the severe pain found in the left thorax in these cases was due to gall stones. He said that he had found gall stones floating free in the gall bladder in cases of malignant disease of the uterus. In another case of fibroids of the uterus, he found a gall stone that produced symptoms of pain in the upper abdomen which did not seem to be gall-stone colicky pains.

The general result of the speaker's observations was that gall-stones either cause definite symptoms which are diagnosticated correctly, or that they cause indefinite symptoms which are considered to be due to faulty digestion. Occasional pains accompanying intestinal peristalsis should be suggestive of gall-stones. Stones too large to pass the cystic duct may give rise to a suspicion of their existence by causing cholecystitis. In many cases the stone fill the entire gall-bladder. He said that he had felt gall-stones firmly grasped by the lower fibres of the gall-bladder which might give rise to intermittent colicky pains. The general result of observations by Dr. Richardson was that the cases vary extremely. He mentioned a case of ulceration of a stone through into the duodenum where there was no history of pain.

The very early symptoms of gall-stones are usually described as "indigestion," "gastralgia," with no jaundice. The most that can be said about this symptom is that it is a kind of discomfort. The pain is therefore the most constant symptom of stone, either a spasm or the consciousness of a discomfort in the right hypochondrium or in the left hypochondrium for which the patient seeks some relief by means of some simple remedy. A experience with such cases should make one skilful in diagnosis. The pains of gall-stones might be said to come with a "regular irregularity," or rather with an "irregular regularity." When after painstaking and prolonged history-taking, there is a recital of such symptoms, making one suspicious of gall-stone, then the surgeon can be of much service. If on top of the history of discomfort there is a history of spasmodic pain at times, and rise of temperature indicating infection in the gall-bladder, then the suspicion of the existence of gall-stone disease is strong indeed.

The diagnosis of gall stone elsewhere than in the gall-bladder would seem to be a more simple matter than the diagnosis of stone in the gall-bladder, yet in many instances the surgeon finds stones impacted in the cystic or common ducts where he never suspected such a state of affairs, this without

jaundice. Where there is an impaction and a damning back of bile, filling the gall-bladder and making it an almost solid viscus, this can be felt beneath the border of the ribs. Yet the speaker has seen cases of impaction without symptoms. The error in making the diagnosis therefore consists in failing to elicit a careful history. There ought to be a description of having had some pain or discomfort. The signs of gall stone in the cystic duct are usually characteristic. There are symptoms dependent upon the closure of the duct. Where there is no distension, the exact diagnosis is a matter of exploration. In the presence of stone in the common or hepatic duct, the most common symptom is jaundice. Yet there are many cases without jaundice. If the history fails to show jaundice, then the history is at fault.

It is argued that an irregularly-shaped stone could be forced into the duct, allowing bile to flow by, yet Dr. Richardson doubted the explanation. The error in not noting jaundice in such cases has been said to be explicable on the ground that the stone passes quickly into the duodenum, without stopping the flow of bile, yet the speaker did not think this probable.

A careful search of the stools without finding a stone is a flimsy means of basing a diagnosis that there is no stone in the gall ducts. The speaker said that he had found many stones in the common duct with thickening of the walls of the duct, indicating that they had been there for years. In all cases there was pain in one form or another. When pain comes on in paroxysms, whether there is jaundice or not, there is a suggestive of gall-stone.

Symptoms of gall-stones are divided into two categories, the one comprising those cases giving a typical history, the other comprising those cases giving a variety of symptoms so great as to surpass belief. The majority of gall stone cases do not present a typical picture. Obscure symptoms occur in the very beginning of the gall-stone disease. Peculiar conditions are met with in the biliary passages. The field of gall-bladder surgery will probably never be cleared up. The essayist said that he has worked in this field for the past twenty years, and with each succeeding year he has become more and more convinced that diseases of the biliary passages are many and obscure in symptomatology. After many attacks of biliary pain and jaundice a stone may be found impacted which sometimes allows bile to escape. There must be some difference in the character of the pain from the passage of the stone into the duodenum and the pain of a stone moving on from place to place of its impaction.

The pain is therefore the most important point and the cause of the pain in gall stone disease can be obtained by reconstructing the history of these cases. The cause of pain in cases in which the gall stone is found in the gall bladder is found in muscular spasm. Where the stone passes to the duodenum, there is pain with or without jaundice. The fact that the bile is completely obstructed is not the cause of pain because total obstruction of bile found in malignant disease of the biliary passage, without pain. Where the tone is impacted, the symptom will be similar to those already suffered, due to the efforts of the muscular fibers to push the stone along. In case there is infection in connection with a thickened gall-bladder, etc., this must have something to do with the pain. Occasionally there is necrosis of the gall-bladder with perforation into the alimentary canal. In such cases of giving way of the gall-bladder walls, there may be no pain of a beginning peritonitis.

What are the indications for surgical interference when the gall stone is suspected to exist? An experience with many cases teaches us many things about this subject.

When a man has a few cases of gall stone colic recover without an operation, he begins to think that there is plenty of time to wait in all cases. A strong suggestion of gall stone practically means gall stone. In practically all cases where Dr. Richardson suspected them, he found them. The less severe the symptoms are, the less severe are the indications for operation, and when the indications of their existence are severe, then the necessity for operation is imperative.

DISCUSSION.

Dr. N. B. Carson thought that the discussion belonged more to the medical man than to the surgeon, because most of these cases are first seen by the medical man and after the diagnosis is made, the surgeon undertakes to give treatment and confirm the diagnosis. He was particularly struck by Dr. Richardson's statement of his interest and joy in diagnosis. There is a tendency on the part of the surgeon to trust too much to the medical man for a diagnosis, and in this tendency there is a trend towards mechanical work by the surgeon. Many of these cases present symptoms of stomach trouble. Recently Dr. Carson operated upon a woman who, imbued with the Roosevelt idea, had had twenty-three children, and from whom he had removed 146 gall stones from the gall-bladder. She gave very little indication of the presence of this mass of gall stones. Another case mentioned by the speaker was one in which the gall-bladder was highly packed with gallstones

where the patient's history was simply occasional attacks of "stomach trouble" until a short time before presenting herself at the hospital when she became jaundiced.

Dr. W. E. Fischel said that there was a good deal to be said on this subject. The symptoms which Dr. Richardson spoke of as indicating the presence of gall stones in the bladder or ducts can often be accounted for by a disturbance of the alimentary tract. The doctor said that he had not yet learned to distinguish between the pains of a frequently recurring gastric indigestion from the pain of a stone in the gall-bladder. The fact that so frequently there is found recurrence of jaundice does not indicate that there is danger of the presence of stone in the gall-bladder. Who has not seen an oft-repeated attack of jaundice as a result of imperfect digestion? It might be argued that if we were not less bold, these cases might be sent to the surgeon and a stone would be found. The speaker said that it might sound like an expression of ignorance on his part, but as a matter of fact he was frequently in a dilemma when dealing with symptoms in the upper right quadrant of the abdomen. He emphasized the fact that it would be a dangerous practice indeed for the internist, after he has exhausted every means in his power to diagnosticate a condition in the upper right quarter of the abdomen to send, all such patients to the surgeon for operation. He said that it always depended upon "whose ox was gored."

Dr. H. Tuholske said that it was indeed true that most cases that are sent to the surgeon by the internist have the diagnosis already made, but that he questioned whether it was right to yield the palm of diagnostic skill to the internal man. He said that a great many people have gall stone disease without characteristic symptoms. This must be so, because it is a fact that a great majority of the people have gall stones, women more than men. The difficulty is in making a diagnosis of some change in the biliary passages requiring operative interference. The diagnosis of cholecystitis is just as imperative as if gall stone was added to it. The surgeon makes the mistake of thinking that if when a case is referred to him he does not make a diagnosis immediately, the case is liable to slip away from his hands to another surgeon. The speaker argued that the surgeon should have plenty of time to make his diagnosis, keeping the case under his observation for weeks, if necessary. If this could be done, the surgeon would make a correct diagnosis in most instances. The pain has certain characteristics in gall stone

disease, especially the pain which the patient feels after the acute attack of colic over. There is a peculiar feeling of discomfort two or three inches below the scapula, a feeling quite "uncanny." The surgeon is handicapped by not seeing the patient during the acute attack. After the diagnosis is made, the surgeon should not hesitate to operate. The fact that many patients get over their attacks after going to Carlsbad does not mean that they have been cured of this disease. There has simply been a cessation of the catarrhal condition in the gall bladder. Some such patients are really helped so much by drinking the Carlsbad water that they are cured, passing their gall stone. The speaker said that he has made it a habit of examining the gall-bladder in all cases where he opens the abdomen. He remembered one case which he thought must have been cured by the Carlsbad treatment, because he said after opening her abdomen later for the extirpation of fibroids of the uterus, he passed his hand up to the gall bladder and found no stones. In this connection he mentioned the old saying, that "there have been enough stones passed in Carlsbad to pave its streets."

Dr. W. G. Moore said that he did not know why he had been called upon to discuss this subject except to tell Dr. Tuholske how to cure gall stones without cutting them out. (Laughter.) If his patient was able to go to Carlsbad, he would send him there. He did not think that there was any remedy to cure gall stone except an operative procedure. He said he liked Dr. Carson's suggestion that the surgeon relies too much upon the medical man to make his diagnosis because the medical man usually makes a diagnosis for the surgeon with which the surgeon agrees before the operation and disagrees after the operation. Appendicitis and gall stone are especially pregnant fields for this state of affair. The cases of appendicitis which I have had operated were all "particularly free from danger from an operation," yet where the fatality occurred, it was due to "technique." He said "technique" was a peculiar term which is quite convenient for the surgeon.

Dr. Richardson, in closing the discussion, said that the medical profession, like congress, need an "opposition" party. He pointed out his extreme conservatism in the past in dealing both with appendicitis and gall stone cases. He said he was the last one to say that there was no danger in opening the abdomen. He pointed out the fact that if the abdomen of perhaps every man in his audience opened, there would surely be but little mortality, but perhaps the same pro-

cedure on an equal number of others would have more mortality. There should always be a reasonable conservatism but no progress can be made unless the profession proceeds correctly. He said that it took him many years to concede the claims of the men such as they are held today regarding the operation for appendicitis, and when it should be performed. He said that the time is coming when the gall stone is to be taken out whether it offends or not.

THE VAGINAL METHOD IN GYNECOLOGY.

Prof. Dr. Duehressen, of Berlin, gave a description of his method of performing gynecological operations through the vagina by his anterior incision method. He demonstrated the method by the aid of a number of excellent cuts made for him by one of his pupils, Zelle. He said that he had actually demonstrated it to a number of St. Louis physicians at the City Hospital on the morning of this day. He said that by separation of the bladder from its ligaments, it was possible to cure every case of cystocele by this method. He mentioned the use of this method in removing ovaries in case of polycystic degeneration ovariae with excessive hemorrhage from the uterus which stops after the operation is performed. It is possible to perform all the operations upon the uterus and its appendages by this method. The uterus is easily pulled down. Pyosalpinx can be operated by this method. He has seen normal pregnancy following this method of operating for removal of an ovary. He said the main objection raised against his method was that one cannot see the operative field, but he maintained that one can see everything, if the proper instruments are used. The mortality with this method is strikingly low compared to that with the abdominal route. In 1600 cases he personally had a mortality less than 2%, and even this mortality was due to the fact these fatal cases were bad cases of extrauterine pregnancy, or cases of large fibroids of the uterus. He thought that the use of the method for operating upon large fibroids was attended with the worst results because of the large area exposed in the operation, especially when there is a following pregnancy; some months ago there was a sudden death of a woman in the eighth month of pregnancy where there had been a previous operation for uterine fibroids by the abdominal route, this death being due to rupture of the uterus at the site of the operation for the fibroids.

After these operations by the vaginal there is not as much pain as there is after the abdominal method. Patients are walking four

weeks after the operation. He mentioned the prejudice against this operation on the part of American surgeons who claim they cannot see what they are doing. Yet he called attention to the fact that the first vaginal hysterectomy was performed by an American, Thomas. He said that operating posteriorly through the cul-de-sac was bad surgery because asepsis is not so good and because forcible traction must be made with consequent danger of tearing the pedicle. In the anterior operation, there is no such traction. The uterus can be pulled out with the finger. The appendages are easily within reach through the anterior operation.

DISCUSSION.

Dr. Geo. Gellhorn said that the operations performed at the City Hospital by Prof. Duehrrsen demonstrated the fact that the most extensive operations can be performed through the vagina as well as by the abdominal route. We wished to make a few remarks upon the technique of the operations. He said it was an established fact that there is less shock as a rule in operating by the vaginal route than by the abdominal. It is also an established fact that vaginal operations are followed by less danger of infection than are those performed by the abdominal route. Dr. Richardson had said in a previous paper that there is always an element of danger in opening the abdomen. Dr. Gellhorn said that he thought this danger was minimized if the approach to the pelvic organs is made, through the vagina. The objections that have been raised against vaginal operations in general are first insufficient view of the pelvic organs. Prof. Duehrrsen has demonstrated that every step of the operation can be seen and that it is the result of either faulty technique or insufficient vaginal instruments that the operator does not see enough in doing vaginal operations. The instrument of the ordinary operator usually uses in vaginal work are those designed for abdominal surgery; the objection to these instruments is that they are not long enough to permit the operator to gain easy access. Another more important objection is that in vaginal operations one is not able to operate upon the appendix or upon the gall-bladder. Dr. Richardson has already dwelt upon the importance of making the diagnosis before operation. If this is done, there will be found many cases in which it will be found that there is no disease of the appendix or gall-bladder. If this is true, then the vaginal route can be used. If there are symptoms of appendicitis or gall stone, then the abdominal route can be used.

Dr. Duehrssen, in closing, stated that one is able to operate upon the appendix through the vagina without any trouble.

MEDICAL MISCELLANY

A DISTINCTION of no mean degree has been conferred upon an American book, the joint authorship of Drs. J. Madison Taylor and William H. Wells. The revised second edition of their treatise on "Diseases of Children," published by P. Blakiston's Son & Co., of Philadelphia, has been translated into Italian by Dr. Mario Flamini, of the Pediatric Clinic of Rome, with contributions by Prof. Concetti and Dr. Valagussa. The translation has proven very popular abroad, and the occasion is one of felicitation, not only to the authors but to American medicine generally, inasmuch as the work was chosen as being especially adapted to clinical teaching in Italy. Few American books have attained such honor. Its success abroad is but a repetition of the favor which it enjoys here.

SAFE LOCAL ANESTHETIC.—Every physician who has employed cocaine as a local anesthetic for any length of time has encountered occasional cases of collapse following its use. Some of these may be due to subjective influences but not all. Some time ago we advised the addition to the cocaine solution of brucine, or 2 per cent, adding if necessary a drop of hydrochloric acid to insure solution. We have now had reports from a sufficient number of cases to satisfy us as to the value of the addition. Brucine gives the support and stimulation of strychnine and is at the same time itself a local anesthetic of no small value. The effect of the cocaine is increased and prolonged by the brucine. Up to the present every reported case has been successful. The importance of this suggestion does not need demonstration.

THE July issue of *The Century* is announced as a fiction number, with the second instalment of Anne Warner's very funny "Seeing France with Uncle John," and short stories by Alice Hegan Rice, Anthony Hope, Harry Stillwell Edwards, Lawrence Mott, Annie C. Muirhead and other popular writers. Mrs. Rice's story is called "The Wild Oats of a Spinster," and is said to be quite as good as its title. Harry Stillwell Edwards's "The Funeral of Rat Brooks" is in the vein of the inimitable "Two Runaways," and Lawrence Mott's "Wilkinson's Chance" will carry the reader back to his "Jules of the Great Heart." "Overproof," the humorous account of an astonishing incident, will introduce a new and promising

writer, W. Albert Hickman. Anthony Hope's story, "What Was Expected of Miss Constantine" is a tale of the unexpected. "Love Laughs at Lions" is said to be one of Miss Kenton's best stories. The list of titles and writers promises an unusually rich and varied number.

A CASE OF GENERAL FATAL INFECTION WITH GONOCOCCUS AND STAPHYLOCOCCUS.—Messrs. Courtois-Suffit and Beaufume report the history of a patient, who after a simple interference with his urethra and many catheterizations, presented a grave infectious condition with multiple suppurations which had a fatal termination. Staphylococci were found in all the abscesses and in the blood. Most of the gonococci were found with all their classic characters in the abscesses at the level of the brachial triceps and the sural triceps (gastrocnemius and soleus) of the right side, on the posterior face of the sternum, in the left thigh, also at the level of the left testicles and epididymus. This is a very rare and exceptional case of a general gonococcic infection to end fatally. It will be noticed, that the gonococci had a predilection for the muscles, and that the patient presented two intramuscular abscesses, like in the cases of O. Bujwid, and that of Johns Hopkins.—*Gazette des Hopitaux*, No. 45, 95, p. 537—From *Am. Jour. of Clinical Medicine*.

NAUSEA AND VOMITING.—Most cases of nausea and vomiting can be relieved by the following:

R Carbolic acid..... gtt. x
Peppermint aq..... 3ij
Aq., q. s. ad..... 3ij

M. Sig.: One teaspoonful every few minutes until relieved.—Burnett, *Medical Summary*.

CHRONIC BRONCHITIS.—The following treatment is recommended by E. Fletcher Ingals to relieve the cough in chronic bronchitis when opiates are not contraindicated:

R Morphinae sulphatis..... gr. 1
Ammonii carbonatis..... gr. 30-40
Mist. glycerrhizae comp.....
Syr. pruni virg.....aa fl. 3 4

M. Sig.: One teaspoonful in water to relieve the cough. Or:

R Terpin hydrat..... gr. 2
Ext. cannab. indicae..... gr. $\frac{1}{10}$
Codeinae..... gr. $\frac{1}{8}$
Ol. menth. pip..... gtt. $\frac{1}{2}$
Sacchari albi..... gr. 3

M. Ft. capsulae No. 1. Sig.: One every four hours until the cough is relieved.—*Merck's Archives*.

CORRESPONDENCE

A WORD REGARDING MOUNT ST. ROSE.

It is with reluctance that I call attention to what might be an injustice to a great work and one much needed in St. Louis. The following correspondence has reference to statements published in the reports of the City Hospital Alumni Society in a recent number of the FORTNIGHTLY.

May 27th, 1906.

DR. HORACE W. SOPER, St. Louis.

Dear Doctor:—In the MEDICAL FORTNIGHTLY of May 25th, you are reported as saying, "At Mount St. Rose the patients sent there in the incipient stage become so depressed by seeing patients in the later stages that they soon left the hospital in many instances."

Kindly let me know if you are reported correctly?

Very truly yours,

WM. PORTER.

To this Dr. Soper promptly replied:

May 29th, 1906.

WILLIAM PORTER, M. D., St. Louis.

Dear Doctor.—Yours of the 27th inst. duly received. The quotation that you refer to is not correct. I wished to emphasize the desirability of having sanatoria for incipient cases only, and said, "that in several instances patients who had been in Mount St. Rose stated to me that they had been depressed by the sight of patients in the late stages of the disease." I regret that I did not notice the manner in which I was reported, as I certainly meant no reflection on Mount St. Rose, as I have the highest regard for the institution and its management.

Very truly yours,

HORACE W. SOPER.

Dr. Soper's honorable reply leaves little room for criticism, but it gives the opportunity for some statements of facts suggested by a further reading of the discussion:

1st. While all stages of tuberculosis are admitted at Mt. St. Rose, care is taken to keep the incipient cases separated from the others. They are forbidden to enter the rooms of the advanced cases, and are given the "out-door treatment," which cannot well be applied to the others. When the new wings are added, separation will be still more definite.

2d. All cases have their meals in their rooms, have individual drinking cups, covered cups for sputum, and are protected as far as possible. Each room is disinfected as soon as vacant, and the floors repeatedly varnished during the year. Those of us who are acquainted with the care taken to prevent in-

fection have no fear. Every week there are applications from non-tubercular cases who, knowing the conditions and the attractiveness of the surroundings, want to come for rest and recuperation.

3d. In less than four years 875 cases of tuberculosis have been admitted, and so far as known to the management, there has been complaint in only a few exceptional instances. One of the cases to which I am sure Dr. Soper refers was a case of bone tuberculosis and was unhappy from the beginning. The records show that a large percentage of our discharged cases if there is evidence of new infection, make application for readmission.

4th. Only those physicians who have personally visited Mt. St. Rose can fairly estimate the magnitude of the work done by the Sisters of St. Mary. The beauty of the extensive grounds, the adaptation of the large building and the care taken with the very reasonable rates, suffice to keep the Sanatorium full, with a large waiting list. Dr. S. A. Knopf, the well known sanatorium expert, spent a day at Mt. St. Rose, and said, that for the purposes intended he could suggest no improvement.

5th. As to the individual care, it is the best that the resources of the institution can afford. The public has been very generous in its support, but the actual expense for each patient for the necessities of living even with the strictest economy has been 99 cents per diem. This means about \$50 each day not including interest on building, repairs, improvements, attendance, etc.

6th. I can earnestly appeal for the honest support of the profession for Mt. St. Rose, as there is not a dollar accruing to any one connected with the management, the very ample return being the experience and the satisfaction of helping the tubercular and protecting their families. Whatever is paid by those who are able is more than offset by the equally worthy who are unable to pay. The very requirements mentioned by the gentlemen who took part in the discussion are emphasized, viz., psychical aids, sanitary care, fresh air, best of food as far as possible, and control of individual symptoms as far as they can be met. Those in charge find it "pretty heavy going" at times, but the work progresses just the same, and each year it becomes more attractive. WM. PORTER.

IN light narcosis the pupils may dilate reflexly from operative manipulations. This, of course, is not to be confused with the sudden extreme dilatation that occurs when the narcosis has been carried too far.

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FAVORITE PRESCRIPTIONS

PRURITUS VULVAE.—The following ointment is highly recommended by Dr. Beall in pruritus vulvae where other applications have failed:

- R** Menthol..... gr. viij
 Quin. sulph..... gr. xx
 Ac. carbolic..... gr. xxiv
 Ungt. hydrarg. nit..... 5j
 Ichtholi..... 5iiss
 Lanolini..... 5vj
 Ol. ricini..... 5x

M. ft. ungt.

Sig.: Apply freely after washing the parts with hot water.—Texas Medical News.

TREATMENT OF DYSMENORRHEA.—In spasmodic and neuralgic dysmenorrhea, the following has proven beneficial if administered several days prior to and during menses:

- R** Fluid ext. hyoseyamus..... 2 drs.
 Fluid ext. cannabis indica... 1 dr.
 Fluid ext. cimicifuga..... 4 drs.
 Spts. camphor..... 1 dr.
 Spts. ether comp. q. s..... 3 ozs.

M. Sig.: Teaspoonful in water three times a day.—Medical News.

FOOT POWDER.—To prevent perspiration and cure corns:

- R** Salicylic acid..... 1½ drs.
 Borax..... ½ oz.
 Prepared chalk..... 1 oz.

M. Sig.: Make into a powder and use as a local application inside stockings and shoes.—Doane, in the Medical Summary.

BRONCHIAL ASTHMA.—The following combination is recommended by the Journal of Medicine and Science in the treatment of bronchial asthma:

- R** Ammonii iodidi..... 5iss
 Extracti grindelia robustae, fld. 5vj
 Tinct. lobeliae..... 5iij
 Tinct. belladonnae..... 5iiss
 Extracti glycyrrhizae fld..... 5ij
 Syrupi tolutani, q. s. ad..... 5iv

M. Sig.: One teaspoonful in water three or four times a day.

THE TREATMENT OF CORYZA IN NURSINGS.—The Courier of Medicine recommends the following treatment of coryza in infants: Internally.

- R** Spts. camphorae..... mʒ
 Tr. belladonnae..... ʒiij
 Quinin sulphat..... gr. iij
 Syrup tolutani, q. s. ad..... 5j

M. Sig.: One-half teaspoonful every three hours.

The relief of the immediate symptoms is best assured by local treatment. The following is a favorite prescription:

- R** Menthol.....
 Campho..... aa gr. j
 Petrolati liquid..... 5j

M. Sig.: One drop in each nostril several times a day.

The menthol and camphor increase the roominess of the meatus and usually afford prompt relief. The oil may be introduced by a small cotton tampon or preferably a bit of cotton on an applicator.

BRONCHITIS.—Dr. Burnett, of Cecil, Ark., advises the following course of treatment in bronchitis when the cough is harsh, dry, and unable to expectorate:

- R** Fluid extract of amphiachyris.. 5ij
 Fluid extract of lobelia..... 5iss
 Simple elixir, q. s..... 5iij

Sig.: Dose, one dram every one or two hours until expectoration is free, and then give:

- R** Fluid extract of prunus virg....
 Fluid extract of lycopus vir... aa 5ij
 Fluid extract of hydrastis..... 5ss
 Glycerin..... 5iij
 Simple elixir, q. s..... 5iij

Sig.: Teaspoonful when needed.

If there is irritable laryngitis with an expulsive sensation in the larynx, the following can be given:

- R** Fluid extract of sanguinaria... 5ss
 Fluid extract of drosera.....
 Fluid extract of collinsonia.. aa 5ij
 Glycerin..... 5iv
 Simple elixir, q. s..... 5iij

Sig.: Dose, one dram every two hours.—Medical World.

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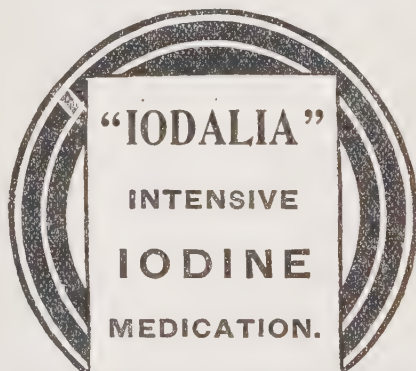
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MEDICAL MEMORANDA.

Treatment of Diabetes Mellitus.—From treating a great many patients with diabetes mellitus with papine I have the experience that I have yet to see a patient that could not stop taking the papine at any time I so directed him. It does not seem to cause the least desire for its continuance, or to create the least disposition to the formation of a drug habit. This has proven itself to me on several occasions when I have had occasion to administer the drug for six or more consecutive months, and the patient be able to stop at the end of that time with no bad effects or symptoms, which would surely have occurred had I prescribed opium or any of its preparations commonly in use today. With that reputation at its back, I use it more and more promiscuously today than ever before, and am pleased with its results.—Dr. J. W. Pearce, in Medical Brief.

Eusoma for Inflammation and Abraded Surfaces of the Rectum.—I take pleasure in saying that after using your echinacea compound (Eusoma) for inflammation and abraded surfaces of the rectum, it has proven very satisfactory and efficient. Personally, I suffered many years from rectal troubles of all kinds, short of fistula; having submitted to ligations, cautery and injections at least twenty times; the last hypodermics being about ten years ago. Since then I have had more or less trouble from ulcerations and small hemorrhoids. I have now been using eusoma on a swab, in full strength, when conscious of discomfort or trouble of any kind, with the most satisfactory and comforting results, even the tumors disappearing after a few daily applications. I feel grateful to you and the Eusoma Co. for having brought so efficient a remedy to my notice.—M. H. Fletcher, M. D., 11 E. Seventh St., Cincinnati, Ohio.

Dysenteric Conditions all present certain physical signs which are in common, such as the frequent stools, great exhaustion and weakened heart action dependent upon the virulence of the poison. Recognizing this toxic manifestation and the constantly increasing danger of autoinfection, our indicated treatment is one which will assist the effort nature is making to render the tract aseptic by ridding itself of the contents of the bowel which has been a fertile field for disease producing germs, to correct the existing fermentation and restore surface circulation which has been seriously interfered with. For this purpose a high colon flush of glyco-thymoline in a 10 per cent solution at 105 deg. should be used at least twice daily. This solution exerts a marked inhibitory effect upon the growth of putrefactive and pathogenic bacteria, depleting the membrane of its products of inflammation and restoring normal glandular secretion.

I hereby volunteer to make a few statements regarding your product known as resinol soap. I have found it to be a wonderful article for treatments of itching scalp. I have had some erysipelas taint in my system for about two years or may be longer. It began, a few months ago, to take on a very aggravating form on my scalp. There were scales and rash and two small lumps formed upon and within the skin on the scalp. It occurred to me that resinol soap might be beneficial if used for a shampoo. I procured a cake of the soap and took it to my barber and requested him to use it freely on the scalp and rub it into the scalp very thoroughly, and then dry the hair with dry towels, not washing the soap off, but leaving it on the scalp in order to get the full benefit of the medicinal qualities of the soap. This treatment leaves the hair in a fine condition, and the result of this treatment upon the scalp was amazing. I was delighted to be so completely and entirely relieved of the itching, I have my scalp treated with the resinol soap once a week for the past few weeks, resulting in one of the lumps in the scalp disappearing entirely and the other lump is nearly gone. I have also found the resinol ointment the best I ever used for eruptions on the skin. It is not only a wonderful healer, but it is of such pleasing consistency that it is a pleasure to apply to the most sensitive parts. I am enthusiastic over these two healing articles, resinol soap and resinol ointment. You are at liberty to make it known to the public the high esteem in which I hold these two remedies.—H. A. Cross, D. D. S., 560 E. 55th street, Chicago, Ill.

Modern Civilization as a Factor in Causing Diseases of Women.—(By N. H. Kasabian, A. B., M. D., Coopersville, Mich.)—A woman, physically perfect, is certainly a unique creature in modern times. Our civilization has contributed very extensively to the causation of female maladies which we are so frequently called upon to treat. Our modes of living and dressing exert a very deleterious influence upon the normal functions of the pelvic organs, not to mention the hepatic compressions and subsequent displacements resulting as a natural consequence of tight-lacing practiced by the most humble devotees of the temple of fashion. We are a very progressive race, taking herculean steps towards a higher civilization; but it is a deplorable fact that the more we learn the more we ignore the most fundamental laws of hygiene. The immediate effects of tight-lacing are, that abdominal and spinal muscles are seldom brought into play, so they become atrophied. The viscera are thus compressed and displaced, and the full play of the abdominal wall and the descent of the diaphragm are interfered with and the venous blood is hindered

in its return to the heart. This obstruction of the circulation and the constipation from which women habitually suffer lead to a permanent dilatation of the pelvic veins, a very fruitful source of diseases of the genital organs. And again, customs demand the protection by veil and gloves from the rays of the sun, and the woman soon becomes as bleached as a well-cultivated celery stalk. As the blood needs the direct chemical effect of the sun-light on the skin an anemia is established. This state of the blood is a potent factor in the generation of all the diseases depending on impaired nutrition and entails conditions likely to baffle all medical efforts at their removal during the menstrual life of the woman. Before the altar of fashion and so-called society our girls, while entering to puberty, have to comply with the dictates of the times and at the period of life when the young girl's whole nerve force is taxed for the full development of her organs of generation this force is deflected by hard study, and it may be for the acquirement of some accomplishment which, in all probability, will be forgotten or laid aside after marriage. She is subjected to the emotional influences of music and light literature, which are capable of arresting the normal development of the uterus and its accessory organs. During my travels in the Orient I have been very much surprised to see, specially among races who do not comply with the trivial demands of modern civilization as their sisters do in occidental countries, young ladies grown to womanhood and into maturity experiencing no menstrual irregularities whatever, giving birth to children with normal labor, and through all their maternal life they do not seem to have any especial need to consult a physician. I do not dare, still I take liberty to state that modern civilization and society have immensely contributed to the creation of gynecology, and the majority of patients who make a daily pilgrimage to a gynecologist's office are the poor and pitiable victims of a misdirected and misinterpreted civilization. There are very few maladies which we are called upon to prescribe for as much as for menstrual disorders. A thorough examination with a view of ascertaining, if possible, any malposition of the genital organs should be insisted upon. The least abnormality should have proper attention and local as well as constitutional treatment. Anemia and chlorosis should have their attention, as they almost invariably play a conspicuous part in causing menstrual irregularities. In the form of ergoapiol (Smith), I believe we possess a remedial agent that combines the most effective ingredients with which we can combat the majority of menstrual irregularities. Clinical observations with this preparation are as follows:

Case No. I. Miss A. B. Age 16. Parents both living and in excellent health. She has not had any serious sickness, although on account of there being tubercular diathesis in the family the least abnormality in the functions of any organs is looked upon with suspicion and at once the advice of the family physician is sought. So when Mrs. A. B. noticed that her daughter had an irregular menstruation accompanied with dysmenorrhea she consulted me in her daughter's behalf. I prescribed for her ergoapiol (Smith) capsules, directing her to give one three to four times a day with milk for three or four days before the expected menstrual period. They complied with my directions very faithfully, and after a few weeks they reported that her menstrual disorders had been satisfactorily regulated.

Case No. II. Mrs. B. Age 38. Has two children. Mother died from the result of an operation for appendicitis. Father living and in good health. Patient has been anemic for many years, her hemoglobin test showing only 40 per cent. Has at present prolapse uteri to a slight degree, some perineal laceration and endometritis. Digestion is at fault part of the time, bowels constipated, ringing and buzzing in the head. Menstruates every three weeks. During the first day of the period it is very painful and she flows very profusely, its duration being from a week to ten days. I prescribed for her ergoapiol (Smith) capsules, one three to four times a day, a day or two before the expected menstrual period, to be continued until menses appear, then to discontinue the capsules for three days, and recontinue, commencing on the third or fourth day. The therapeutic action of the remedy was all that could be expected. The dysmenorrhea, which was always a conspicuous feature, seemed to yield after the administration of the first few capsules. She menstruated quite easily and the duration was very moderate.

Case No. III. Mrs. —. Age 39. Two children, youngest 8 years old. A sufferer from digestive disorders, anemia, and of late, while approaching menopause, she has been having considerable difficulty with her menstruations. At times very profuse and exceedingly painful and again very scant and period prolonged. Having tried a number of preparations without any appreciable benefit to her, decided to use ergoapiol (Smith). She was directed to use a capsule three to four times a day, commencing two or three days before the expected menstrual period. After using this preparation for a little while she reported that she "had not suffered any pains or inconvenience since she began taking those capsules."

Case No. IV. Mrs. —. Age 38. Married 18 years, four children, youngest four years old. During her menstruation she flows so profusely that she is frightened of a fatal termination. I prescribed for her ergoapiol (Smith) capsules, instructing her to take one after appearances of menstruation, three to four times a day for two or three days until the menstrual flow was controlled. During her subsequent visits to my office I was very much pleased to learn that she has had no trouble to speak of with her menstrual periods while taking the capsules that I prescribed for her.—*Am. Jour. Surgery.*

The Proper Strength of Adrenalin Solutions in the Treatment of Hay Fever.—In the treatment of hay fever with adrenalin chloride it has been suggested that weak solutions, frequently applied, are apt to yield better results than the occasional application of a strong solution. One of the pathological features of this peculiar malady is a turgescence of the turbinal tissues due to excessive dilatation of the capillaries. That this is the result of a neurosis involving a more or less pronounced local vasomotor paralysis is pretty generally conceded. Overestimation, by reaction, is very sure to result in a complete paralysis of the vasomotor supply in the region affected. On the other hand, gentle stimulation with weak solutions is not so likely to be followed by a reaction. These views are in harmony with the published observations of Dr. Crile, of Cleveland, O., who found that in a decapitated animal the heart's action was better sustained by the continuous administration of a weak solution of adrenalin chloride. Furthermore, this is probably nature's method of supplying this vital principle to the healthy human body through the agency of the suprarenal gland, its constant presence in the blood in minute amount being sufficient to maintain vasomotor equilibrium.

The School-room as a Factor in Diseases of Young Girls.—There is no disguising the fact that our system of imparting knowledge by imposing excessive intellectual labor and stimulating competitive zeal in the school-room is very largely responsible for most of the nervous disorders of the young women of to-day. That sustained mental exertion is a menace to the health of girls at the age of puberty, there can be no denying. Yet that is precisely the system in vogue at our institutions of learning at the present time. While it is true that modern architecture has greatly improved the hygienic condition of the study-rooms, it is highly probable that the present rush and hurry methods of instruction are even more injurious to the physical state of our young women than was the faulty system of ventilation, until recently endured. The worry and excitement attendant upon present-day school life is, undoubtedly, the prime cause of a governing percentage of the neurotic disturbances which are so prevalent among the women of America. In fact, it is quite within the bounds of truth to assert that many of the diseases which present themselves to the gynecologist have for their origin a nervous system rendered bankrupt by strife in our temples of education. Mental over-strain, when enforced day after day, soon renders the nerve structure incapable of absorbing adequate nourishment from the blood stream. Ultimately, nervous vitality is almost completely exhausted and depression, gloom, languor and mental impotence ensue. As the taxation is extended, the condition grows worse until anemia, anorexia, insomnia, melancholia, and perhaps, hysteria develop. Inasmuch as it is not within the power of the physician to remedy this evil system of handling our young women, it remains for him to evolve means of attenuating, as far as possible, the injury done, and preventing the development of lasting diseases which have their origin in the shattered nervous system. This is best accomplished by the upbuilding of the psychical and physical resources of the individual. Not by the employment of stimulants which act, ephemerally upon the organism, but by encouraging functional activity to its maximum degree consistent of course with normality. Obviously, this must be done by maintaining the entire digestive system at its proper standard, for it is through these channels that vital force is obtained and the well being of the economy is preserved. It is not consistent with logic to achieve this end by resort to the employment of those agents which relieve the digestive secretions of their special provinces. On the contrary, it is the very extreme of indiscretion to encourage dependency of the gastric or intestinal fluids, or to aid them in the performance of their duties beyond very circumscribed limits. Quite the most rational course to pursue is that of extending to Nature gentle, but ample, encouragement through the administration of an agent which is capable of bringing functional activity to its highest point without entailing the necessity of prolonged drugging. It is supremely important that the drug be one that can be withdrawn without leaving the economy disqualified to maintain a normal fund of force. It is here that iron is of the greatest therapeutic use. Not only does it impart to the blood stream a full measure of nutrition-conveyors in the form of hemoglobin, but it substantially increases the capacity of the tissues to absorb and utilize the nourishment placed at their disposal by the circulatory system. Further, iron, when administered in the proper form, augments functional activity throughout the entire digestive apparatus, and, thuswise, enables the economy to secure the full benefit of the food supply. To this action of the drug is due the greatest profit to the individual resulting from its use. The objections applicable to some forms of iron gain added importance in this particular class of cases, for the reason that the peculiarities of the disorders under consideration are such as to be greatly aggravated by an improper form of iron. Chief among these peculiarities is constipation, which is invariably a disturbing factor. The existing constipation is easily made worse by both the carbonate and acid solutions of iron; and, in fact these forms of the drug are notably stool-discouraging. Digestive processes are also depressed by these forms of iron, and headache frequently follows their use. Partly because of these objections, but mainly an account of its manifold advantages, pepto-mangan (Gude) is given the preference over all other forms of iron, and a mass of clinical data has been brought forth to sustain this opinion. Pepto-Mangan (Gude) is of the greatest aid in the treatment of all the ill-defined disorders commonly encountered among school-girls who exhibit a tendency to anemia, nervous debility, anorexia, moroseness and mental depression. Obviously, this general emphatic endorsement of pepto-mangan (Gude) by the most exacting members of the profession is based upon a critical analysis of its therapeutic advantages over the ancient forms of iron.



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